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ABSTRACT

Designed to provide a basic core on instruction in teaching farm management in Oklahoma, this manual is intended for use in the first year of a three-year adult postsecondary program of instruction. The materials may also be used to teach producers currently engaged in production agriculture. Instructors are encouraged to supplement the instructional units with resource matter and people and to use concurrently the "Oklahoma Young Farmer Association Record Book." The thirteen Year I units focus on records and record keeping: the areas covered include orientation and introduction, record keeping, inventory, depreciation, enterprise accounting, enterprise budgets, cash flow, farm credit, partial budgeting, financial statements, income tax, income tax management, and year-end closing of records. Performance objectives, which form the basis of each unit, are given as both a unit objective, stating the subject matter to be covered in the unit, and as specific objectives, stating the student performance necessary to reach the unit objective. Each unit then provides some or all of these components: suggested activities for teacher and students, references, information sheets, assignment sheets with answer sheets, and visual aids. Units are planned for more than one lesson or class period of instruction. (YLB)

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FARM BUSINESS MANAGEMENT

YEAR 1

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For the Division of Vocational Agriculture Education
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FOREWORD

This publication is designed to provide a basic core of instruction in teaching farm management in Oklahoma.

The teachers may use these materials to assist them in providing instruction for producers currently engaged in production agriculture. Agriculturists in today's fast paced world of economics must not only be knowledgeable and well informed in matters relating to production agriculture, they must also be well versed in management and economics principles and techniques in order to make decisions required in their rapidly changing occupations.

Appreciation is expressed to the many individuals who helped in the development of this publication.

Francis T. Tuttle, State Director
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PREFACE

Agriculture has become an increasingly demanding profession. Not only does agriculture require a great deal of knowledge and skill in the actual physical production of the agriculture commodity, but it is requiring new skills be developed in management and economic analysis of the farm or ranch. Until recently, only production skills were taught in secondary schools. Because many graduates of secondary programs have not received sufficient instruction in management techniques which may be just as important as the actual production of the commodity, this manual was developed.

Farm Business Management I is intended for use as an adult post secondary program of instruction for a three year period with Farm Business Management II, and III following the Year I units of instruction. There is little doubt it will be of considerable benefit to instructors of vocational agriculture who wish to supplement agriculture core curriculum previously developed by the Oklahoma State Department of Vocational and Technical Education in the instruction of farm and ranch management.

Every effort has been made to make this publication basic, readable, and by all means usable. Admittedly the publication does not cover every area of farm and ranch management, but it does provide the basics and gives the student the opportunity to progress without a great deal of repetition.

Some areas of farm management have been left out of this publication and for good reason. It would be impossible to cover all areas of farm and ranch management in a one year period in the time allocated to this program. Year II and Year III units of instruction go into more detail on selected topic areas. Year I units focus on records and record keeping. Without good records, further analysis of the farm or ranch business is impossible. It is recommended the *Oklahoma Young Farmer Association Record Book* be used in conjunction with the teaching of Year I units of instruction.

Three vital parts of instruction have been left out of the publication intentionally: motivating, personalizing, and localizing. Not only are these areas left to the individual instructors, but such instructors should capitalize on them. Then, and only then, will this publication become a vital part of the teaching-learning process. Instructors should supplement this publication with additional materials which they feel necessary for their particular area of the state or nation.

After teaching from this publication, each instructor should be able to say "this is the way" because all of the resources are focused toward a measurable outcome. The student should be able to perform at a higher level because of both the student and instructor know exactly where each is going.

During the past eight years, the Curriculum and Instructional Materials Center staff has strived to develop and disseminate the best instructional materials possible. Every effort has been made to insure success with the implementation of this curriculum. The CIMC's resources are always available to vocational teachers.

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ACKNOWLEDGEMENTS

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Special appreciation and thanks to Dr. Raleigh Jobes, Associate Professor, Extension Economics, Oklahoma State University, for his coordination of the Agriculture Economics Department and the Cooperative Extension in the developmental stages of this manual. Special appreciation and thanks also goes to Bob Mitchell, Young Farmer Consultant, and Central District Vocational Agriculture Supervisor for his continued support and dedicated work to the Farm Business Management program.

Special appreciation and thanks to Amie Schenandoah, Editorial Specialist, who spent many long hours working to make this curriculum one of the best. Appreciation is also expressed to the remainder of the Curriculum staff for their continual support and assistance.

A special note of gratitude is given to Edith Mekis for the artwork and Teddi Cox, Terra Stone, and Chris Benson for typing and quick copy.

USE OF THIS PUBLICATION

Instructional Units

Farm Business Management I curriculum includes 13 areas. Each instructional unit includes some or all of the basic components of a unit of instruction: performance objectives, suggested activities for teacher and students, information sheets, assignment sheets, and visual aids. Units are planned for more than one lesson or class period of instruction.

Careful study of each instructional unit by the teacher will help to determine:

A. The amount of material that can be covered in each class period
B. The skills which must be demonstrated
    1. Supplies needed
    2. Equipment needed
    3. Amount of practice needed
    4. Amount of class time needed for demonstrations
C. Supplementary materials such as pamphlets or filmstrips that must be ordered
D. Resource people that must be contacted

Objectives

Each unit of instruction is based on performance objectives. These objectives state the goals of the course, thus providing a sense of direction and accomplishment for the student.

Performance objectives are stated in two forms: unit objectives, stating the subject matter to be covered in a unit of instruction, and specific objectives, stating the student performance necessary to reach the unit objective.

Since the objectives of the unit provide direction for the teaching-learning process, it is important for the teacher and students to have a common understanding of the intent of the objectives. A limited number of performance terms have been used in the objectives for this curriculum to assist in promoting the effectiveness of the communication among all individuals using the materials.

Following is a list of performance terms and their synonyms which may have been used in this material:

Name	Identify	Describe
Label	Select	Define
List in writing	Mark	Discuss in writing
List orally	Point out	Discuss orally
Letter	Pick out	Interpret
Record	Choose	Tell how
Repeat	Locate	Tell what
Give		Explain

Order	Distinguish	Construct
Arrange	Discriminate	Draw
Sequence		Make
List in order		Build
Classify		Design
Divide		Formulate
Isolate		Transcribe
Sort		Reduce
		Increase
		Figure

Demonstrate
Show your work
Show procedure
Perform an experiment
Perform the steps
Operate
Remove
Replace
Turn off/on
(Dis) assemble
(Dis) connect

Reading of the objectives by the student should be followed by a class discussion to answer any questions concerning performance requirements for each instructional unit.

Instructors should feel free to add objectives which will fit the material to the needs of the students and community. When a teacher adds objectives, he/she should remember to supply the needed information, assignment and/or job sheets, and criterion tests.

Suggested Activities

Each unit of instruction has a suggested activities sheet outlining steps to follow in accomplishing specific objectives. Duties of the instructor will vary according to the particular unit. However, for best use of the material they should include the following: provide students with objective sheet, information sheet, assignment sheets, and job sheets; preview filmstrips, make transparencies, and arrange for resource materials and people; discuss unit and specific objectives, information sheet, and assignment sheets; demonstrate and discuss procedures outlined on job sheets; give test. Teachers are encouraged to use any additional instructional activities and teaching methods to aid students in accomplishing the objectives.

Information Sheet

The information sheet provides content essential for meeting the cognitive (knowledge) objectives of the unit. The teacher will find that the information sheet serves as an excellent guide for presenting the background knowledge necessary to develop the skill specified in the unit objective.

Students should read the information sheet before the information is discussed in class. Students may take additional notes on the information sheet.

Transparency Masters

Transparency masters provide information in a special way. The students may see as well as hear the material being presented, thus reinforcing the learning process. Transparencies may present new information or they may reinforce information presented in the information sheet. They are particularly effective when identification is necessary.

Transparencies should be made and placed in the notebook where they will be immediately available for use. Transparencies direct the class's attention to the topic of discussion. They should be left on the screen only when topics shown are under discussion. (NOTE: Stand away from the overhead projector when discussing transparency material. The noise of the projector may cause the teacher to speak too loudly.)

Assignment Sheets

Assignment sheets give direction to study and furnish practice for paper and pencil activities to develop the knowledges which are necessary prerequisites to skill development. These may be given to the student for completion in class or used for homework assignments. Answer sheets are provided which may be used by the student and/or teacher for checking student progress.

Page Numbering System

Each section in this publication is assigned a specific unit number. Pages are numbered consecutively within each section. For example, Orientation covers pages 1 through 17. If the page is available as a transparency master, TM appears at the bottom of the page.

The following key will help to easily identify each section by color:

White - Objectives and Transparency Masters

Green - Information Sheets

Buff - Assignment Sheets

Pink - Suggested Activities, and Answers to Assignment Sheets

ORIENTATION AND INTRODUCTION
UNIT I

UNIT OBJECTIVE

After completion of this unit, the cooperator should be able to discuss the purposes of the farm business management program. The cooperator also should be able to identify farm and family goals and decision-making steps. This knowledge will be evidenced through listing farm and family goals and by completing the enrollment forms.

SPECIFIC OBJECTIVES

After completion of this unit, the cooperator should be able to:

1. Explain purposes of the Farm Business Management program.
2. Name sections of the Farm Business Management program.
3. List benefits of the Farm Business Management program.
4. Discuss the importance of goal setting.
5. Develop possible farm and family goals.
6. List steps in decision-making.
7. Explain purposes of systematic decision-making.
8. Discuss the importance of record keeping.
9. Set goals.
10. Complete enrollment forms.
11. Use a partial budget in the decision-making process.

ORIENTATION AND INTRODUCTION
UNIT I

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

A. Provide each cooperator with objective sheet.

B. Provide cooperator with information and assignment sheets.

C. Make transparencies.

D. Discuss unit and specific objectives.

E. Discuss information and assignment sheets.

F. Discuss with each cooperator benefits of setting long range goals and objectives.

II. Instructional materials:

A. Objective sheet

B. Information sheet

C. Transparency master: TM 1--All FBFM Enrolled Farms Compared with All Illinois Farms

D. Assignment sheets

1. Assignment Sheet #1--Set Goals

2. Assignment Sheet #2--Complete Enrollment Forms

3. Assignment Sheet #3--Use a Partial Budget in the Decision-Making Process

III. Unit references:

A. Memorandum of Understanding Between Oklahoma State University of Agriculture and Applied Science and Oklahoma State Department of Vocational and Technical Education for Technical Assistance with Pilot Farm Management Education Programs in Area Vocational Technical Schools, N.D.

B. German, Lehi, and Denker, Robert. *Farm Business Analysis: Instructor's Handbook*. Columbia, University of Missouri-Columbia, Missouri Agricultural Education, N.D.

C. Kuhlman, Richard S., and Casey, James E. *Selected Examples of the Uses of Partial Budgeting in Farm Management*. Stillwater: Oklahoma State University. Unpublished duplicated material, N.D.

D. Walker, Odell L. *Agricultural Economics 4403, Farm and Ranch Management II.* Stillwater: Oklahoma State University, 1978.

E. Walker, Odell L. *Decision Making Under Uncertainty-Definitions.* Stillwater: Oklahoma State University. Unpublished material, N.D.

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G. Deoksen, Gerald A., Schreiner, Dean F., and Barrett, Dean E. *Multipliers of Agriculture and Other Industries.* OSU Extension Facts No. 821. Stillwater: Oklahoma State University, N.D.

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I. *Farm Business Management.* 1976 Educational Programs Annual Report. North Mankato, Minnesota: Mankato AVTI, April 1977.

J. *Farm Business Analysis and Farm Management Associations in Illinois.* Annual Statistical Report of Activities. Urbana, Illinois: University of Illinois, 1975.

K. Reff, Tom. *Kota-Chek Farm Records.* Farm Management Planning Guide. Fargo, North Dakota: North Dakota State University Cooperative Extension Service, N.D.

L. Reff, Tom. *Farm Records--A Tool for Farm Management.* Farm Management Planning Guide. Fargo, North Dakota: North Dakota State University Cooperative Extension Service, N.D.

IV. Additional references:

Slides--"Introduction to Farm Business Management." Available from the Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1515 West Sixth Avenue, Stillwater, Oklahoma 74074.

ORIENTATION AND INTRODUCTION
UNIT I

INFORMATION SHEET

I. Purposes of the Farm Business Management program

A. Improves farm management ability

B. Establishes farm and family goals

C. Develops a record keeping system

D. Uses records in planning and analysis

E. Uses basic analytical tools (enterprise budgets, budgeting, financial sheets, cash flow, income and net worth statements)

F. Improves decision-making abilities

G. Establishes a long-term farm plan

II. Sections of the Farm Business Management program

A. Record keeping--Develops skills in keeping farm records for use in identifying and analyzing strengths, weaknesses, decision-making, credit standing, financial performance, history of the farm, legal purposes (income and Social Security taxes, and government programs)

B. Credit planning and analysis--Uses financial statements to determine the need for credit, cost of credit from alternative sources, and payback capabilities of the enterprise

C. Development and evaluation of long-term plans--Attains farm and family goals by employing available resources in different alternatives as evaluated by use of planning tools

Examples: Partial budgets, financial statements, enterprise budgets

D. Income tax management--Maximizes after-tax income and stabilizes income from year to year

E. Financial management--Identifies strengths and weaknesses of the farm business, assesses financial progress, and makes necessary corrections to improve future profitability of the farm business

F. Marketing strategies--Assesses advantages and disadvantages of contracting, hedging, and other marketing strategies, then selects the best alternative in keeping with the firm's position, attitude toward risk, and farm and family goals

INFORMATION SHEET

G. Machinery management--Evaluates machinery size and efficiency within farm constraints, and considering machinery cost, replacements, and purchases

(NOTE: Constraints of labor, management, time limits, and management ability apply to machinery management.)

H. Estate planning--Minimizes transfer costs, consistent with the goals of the owner

Examples: Equitable distribution, keeping estate intact

I. Risk management--Reduces variability of income through flexibility, diversification, skillful marketing, financial reserves, insurance, and other strategies

Examples: Physical dispersion, irrigation

J. Farm business organization--Surveys alternative forms of business organization and their advantages and disadvantages

Examples: Sole proprietorship, partnerships, corporations

III. Benefits of the Farm Business Management program (Transparency 1)

(NOTE: Transparency 1 shows production on all Farm Business and Farm Management [FBFM] farms in 1977 compared with that on all Illinois farms as reported in Illinois Agricultural Statistics by the Illinois Crop Reporting Service. FBFM farms had 30% more tillable land in row crops than the average of all farms in Illinois. They averaged twice as many acres in size, 10% higher than corn, soybean, and wheat yields, and 2.6 times as much value of production per farm than the average of all Illinois farms. Cause of the difference is difficult to pinpoint. However, the Illinois program is well-established and has been in service for over 50 years.)

A. To the farmer

1. Improves ability to survive
2. Charts farm growth and financial progress over time
3. Increases knowledge about farm business performance
4. Identifies farm and family goals
5. Improves income tax management and use of financial statements
6. Evaluates estate planning alternatives based on goals and objectives

INFORMATION SHEET

B. To the community

1. Strong and stable agriculture gives strength to the community

2. When a farmer purchases inputs from an agri-business, that business is being supported by agriculture

3. Businesses provide consumption items, without which the lifestyles of rural people would be greatly restricted.

IV. Importance of goal setting

A. One goal of this program is to assist the cooperator in attaining farm and family goals. The first step, though, is to know what those goals are

B. Planning goals is not easy. Members of the family may not agree on what goals are important. Give serious thought to the goals selected so that all family members can benefit from the farming business

(NOTE: Not all goals are related to farm income. It may be important to consider social, community, family, church, and educational goals as well.)

C. Setting up goals in a systematic way lets the cooperator fit wants and desires of all family members into a plan. There are no right or wrong goals since each family may approach the problems they face in a different way

V. Possible farm and family goals

A. Profit maximization

B. Increase net worth

C. Control a larger business

D. Avoid low returns or losses

E. Manage borrowing needs

F. Improve the standard of living

G. Leisure time

H. Have a neat well-kept farmstead

I. Community involvement and service

(NOTE: This list is not intended to be exhaustive, and conflicts may exist between these goals.)

INFORMATION SHEET

VI. Steps in decision-making

A. Define problem

B. Gather information about alternative solutions

C. Evaluate alternative solutions

Examples: Enterprise budgets, linear programming, whole farm budgeting

D. Make decisions consistent with goals

E. Put decisions into effect

F. Evaluate and accept consequences

Examples: Decide on farm enterprises, production practices, and resources used; plan farm capital investments and financing; coordinate farm plans with laws, regulations, and family goals; decide and arrange sale and purchase of products and inputs; plan and maintain effective market farm management controls; use records and record analysis

(NOTE: Most decisions are made under conditions of uncertainty or imperfect knowledge. For any particular decision, there may be a number of possible outcomes depending on factors which are beyond the control of the farmer. These possibilities may be accounted for using probability of a future event occurring.)

VII. Purposes of systematic decision-making

1. Achieve outcomes closely related to goals
2. Achieve timeliness in decision-making
3. Better organized thought processes

VIII. Importance of record keeping

1. Legal
2. Credit
3. Management

ALL FBFM ENROLLED FARMS COMPARED WITH ALL ILLINOIS FARMS

	FBFM Farms	All Illinois Farms	FBFM as % of Illinois
PER FARM:			
Acres in Farm	474	242	196
% Land in			
Corn	51	38	134
Soybeans	39	30	130
Wheat	9	5	180
Yields per acre:			
Corn	112	105	106
Soybeans	40	37	108
Wheat	36	33	109

ORIENTATION AND INTRODUCTION
UNIT I

ASSIGNMENT SHEET #1--SET GOALS

Name: _____ Date: _____

Address: _____

What do you as a family consider most important for your future welfare, happiness, and security? One of the steps for improving the farm and home business is to clarify what is wanted. You may know of things you have wanted as a family, but it takes considerable thought and discussion among family members to agree upon what is most important and which things come first. As a family, write down your goals for this year and for the future, then number them in order of priority. It is important that goals be reviewed periodically to see if conditions have changed. If the goals are too inflexible, they may be a liability to your progress rather than an asset

FARM BUSINESS GOALS

	1 to 2 YEARS SHORT TERM	3 to 5 YEARS INTERMEDIATE TERM	OVER 5 YEARS LONG TERM
INCOME:			

SIZE OF FARM:

A. ACRES

B. SALES

C. INVESTMENT

FINANCIAL SECURITY:

A. SAVINGS

B. PERCENT EQUITY

OTHER:

ASSIGNMENT SHEET #1

FAMILY GOALS

SHORT TERM INTERMEDIATE TERM LONG TERM

HOME:

DEVELOPMENT OF FAMILY MEMBERS:

SOCIAL AND RECREATION:

COMMUNITY AND CHURCH INVOLVEMENT:

OTHER:

(NOTE: These headings are given only as a guide for possible areas to be considered; other headings or subheadings may be added. Goals should be set in quantitative terms in order to measure progress toward attainment of your goals. Quantitative terms may include amount of income, size of farm, percent increase in net worth, amount of income spent on home and development of family members.)

ORIENTATION AND INTRODUCTION
UNIT I

ASSIGNMENT SHEET #2--COMPLETE ENROLLMENT FORMS

Name _____ Age _____ Social Security No. _____

Spouses Name _____ Age _____ Social Security No. _____

Mailing Address _____

Home Phone _____ Business Phone _____

Location of Farm	Children(s) Name	Age(s)
_____	_____	_____
_____	_____	_____
_____	_____	_____

Type(s) of enterprise(s): (please check)

Dairy _____ Peanuts _____

Beef Breeding _____ Swine Breeding _____

Beef Fattening _____ Swine Fattening _____

Wheat _____ Milo _____

Soybeans _____ Others _____

Cotton _____

Appropriate Time for Farm Visit: Check appropriate space(s)

8	9	10	11	12	1	2	3	4	5	6	
											Monday
											Tuesday
											Wednesday
											Thursday
											Friday
											Saturday

ORIENTATION AND INTRODUCTION
UNIT I

ASSIGNMENT SHEET #3--USE A PARTIAL BUDGET IN THE DECISION-MAKING PROCESS

Many cooperators in Oklahoma have cattle on wheat. The decision to graze out part of the wheat or to combine all of it would have to be made around March 1 and be based on expected yields and prices of wheat and stockers. Using the decision-making criteria examined earlier, we obtain the information listed below.

(NOTE: Data on price and yield used in this example is based on representative budgets for wheat and stockers for southwestern Oklahoma enterprise budget numbers 13601336 and 76700804.)

A. The problem is defined as maximization of income from a given acreage currently planted in wheat

B. We find alternatives and list information covering them

Examples: Choice steers 571.25# on March 1 sell for $70.00 per cwt.; choice steers 701# on May 15 sell for $66.00 per cwt; wheat yield is 32 bushels per acre; wheat price on June 1 is $3.33 per bushel; interest on capital (livestock) March 1 to May 15 is $1.87 per steer; salt and mineral cost March 1 to May 15 is $1.14 per steer; labor March 1 to May 15 is $3.39 per steer; custom combining is $8.00 per acre; custom hauling is $0.10 per bushel or $3.20 per acre; veterinary costs are $3.15 per head

C. We have selected the analytical procedure to be used, in this case partial budgeting. Since partial budgeting will be used additional costs are those costs incurred by keeping the cattle through May 15, reduced returns are the value of wheat which is not received if grazed out, reduced costs are the costs of combining and hauling which is incurred if wheat is grazed out, additional returns are the value of beef grown from March 1 to May 15

(NOTE: A positive net amount says from an economic standpoint, it would be wise to proceed with the alternate plan. Negative amounts imply that it would not be economically profitable to proceed with the change. Final decisions by the manager should include consideration of these results along with other pertinent elements of decision desires and goals.)

D. The decision is made based on the goal of profit maximization. The cooperator would sell cattle on March 1 and harvest the wheat with a negative economic result of -$42.12 per acre

E. The decision is implemented by leaving the cattle on the wheat until March 1, removing them and harvesting the wheat later in the summer

F. Consequences of the decision are accepted and will be fully known after harvest

(NOTE: This example does not show the effect price variability risk would have upon the decision. If the price of cattle had been higher, you might have had a positive return; in that case, the decision would have been to graze out the cattle until May 15.)

ORIENTATION AND INTRODUCTION
UNIT I

ANSWERS TO ASSIGNMENT SHEET #3

PARTIAL BUDGET FORM

SITUATION: LEAVE STOCKERS ON WHEAT PASTURE FROM MARCH 1 TO MAY 15 RATHER THAN REMOVE STOCKERS AND COMBINE WHEAT.

ADDITIONAL COSTS[1]		ADDITIONAL RETURNS	
INTEREST IN INVESTMENT	$ 1.87	ADDED RETURN IF STOCKERS	
VETERINARIAN COSTS	$ 3.15	ARE KEPT TO MAY 1	$ 62.79
SALT AND MINERALS	$ 1.14		
LABOR	$ 3.39		
SUBTOTAL	$ 9.55		

REDUCED RETURNS		REDUCED COSTS	
WHEAT PRODUCTION		CUSTOM COMBINING	$ 8.00
32 BUSHEL AT $3.33/BU.	$106.56	CUSTOM HAULING .10/BU.	$ 3.20
SUBTOTAL	$106.56	SUBTOTAL	$11.20

A. TOTAL ANNUAL ADDITIONAL COSTS AND REDUCED RETURNS	$116.11	B. TOTAL ANNUAL ADDITIONAL RETURNS AND REDUCED COSTS	$73.99

NET CHANGE IN INCOME (B MINUS A) -$42.12

[1]ESTIMATES ARE BASED ON ACTUAL DATA FROM REPRESENTATIVE BUDGETS FROM SOUTHWESTERN OKLAHOMA (ENTERPRISE BUDGETS NUMBERS #13601336 AND #76700804)

SOLUTION: Remove stockers on March 1 and combine wheat as planned previously.

RECORD KEEPING
UNIT II

UNIT OBJECTIVE

After completion of this unit, the cooperator should be able to discuss reasons for keeping farm records and to identify different components and sections of the record book. The cooperator will be able to demonstrate proper procedures by making record book transactions.

SPECIFIC OBJECTIVES

After completion of this unit, the cooperator should be able to:

1. Discuss in a short paragraph primary reasons for keeping farm records.
2. Explain concepts of accounting procedures.
3. Name major components of the *Oklahoma Young Farmer Association Record Book.*
4. Discuss posting strategies.
5. Identify specific sections of the *Oklahoma Young Farmer Association Record Book.*
6. Demonstrate procedures for making record book transactions.

RECORD KEEPING
UNIT II

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

A. Provide each cooperator with objective, information, and assignment sheets.

B. Make transparencies.

C. Discuss each unit and specific objective.

D. Discuss information and assignment sheets.

II. Instructional materials:

A. Objective sheet

B. Information sheet

C. Assignment Sheet #1--Making Record Book Transactions

D. Answers to assignment sheet

III. Unit references:

A. Casey, James E., and Roush, Clint E. *Financial Records: The Net Worth Statement*. OSU Extension Facts. No. 711. Stillwater: Oklahoma State University, N.D.

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RECORD KEEPING
UNIT II

INFORMATION SHEET

I. Primary reasons for keeping farm records

A. Legal

1. Taxes

a. Income tax reporting--All taxpayers, including farmers, must keep records which enable them to accurately prepare an income tax return and permit the Internal Revenue Service to determine whether the law has been correctly applied

b. Income tax management--The objective of tax management is to maximize after tax income, not necessarily to minimize the amount of taxes paid. Farmers must think "taxes" throughout the year, as tax management is a continuous process, not just a year-end endeavor

c. Social Security--Social Security retirement and survivorship benefits are based on average earnings over a period of years. Farmers may want to increase their net farm income to the maximum in order to secure larger Social Security benefits. In doing so, income taxes automatically will be increased. However, it may be desirable to do so to gain additional retirement, disability, and death benefits. Although farmers approaching retirement are most concerned with increasing Social Security earning levels, it should be remembered that survivorship benefits provided under Social Security can be extremely valuable for farmers with young children

2. Estate planning and settlement

3. OSHA and Environmental Protection Agency

4. Fuel allocation

B. Credit--Records furnish information for planning credit needs and repayment schedules of the farmer as well as for determining repayment ability. Records also provide evidence of security for production loans and chattel property mortgages. Properly and accurately kept records provide the banker with financial information needed for justification in prompt handling of credit requests

INFORMATION SHEET

C. Management

1. Determines net farm income and financial progress of the farm over time

2. Aids in identifying strengths and weaknesses of business and management performance

3. Aids in making decisions for changes in the farm business

D. Miscellaneous uses

1. History of the farm business

2. Basis for lease and business agreements

3. Adjustment of claims in case of fire or other casualty

4. Government programs

5. Transaction records

II. Concepts of accounting procedure

A. Types of records

1. Financial records--Indicate monetary receipts and expenditures during the year for the business. The record system may be anything from a sheet of paper, to a shoebox full of receipts and cancelled checks, to an organized journal. These records are used to develop financial information for the business. The minimum core of financial statements required in a well managed business are:

   a. Net worth statement--Balance sheet

   b. Income statement--Profit and loss statement

   c. Projected cash flow

   (NOTE: The balance sheet and income statement are summaries of information recorded in the *Oklahoma Young Farmer Association Record Book.* Projected cash flow is a recorded projection of the amount and timing of all receipts and expenditures that are expected to occur throughout the coming year.)

2. Physical records--Records which relate to the production of crop or livestock enterprises on the farm, the resources used, and are used for management analysis. Physical records do not indicate anything about financial position or outcome of the farm

   Examples: Labor, feed, crop fertilization, crop yield records

INFORMATION SHEET

B. Single entry versus double entry accounting systems--The *Oklahoma Young Farmer Association Record Book* is a single entry record book. Single entry records are those in which each transition is entered in only one account. The single entry system is considered more practical for farm business application. The object of a single entry system is to reduce the amount of work involved in keeping records. They differ from double entry accounts only in the manner in which transactions within the year are entered, and in accuracy checks made available. Each expense or sales item is recorded only as an expense or a receipt; therefore, single entry accounting is less complicated and less time consuming than double entry accounting

C. Methods of accounting

1. Cash method--Entries are made in accounts only after the cash or money has exchanged hands. A purchase is recorded when it is paid for, not when the transaction takes place. A receipt is recorded when the money is received, not when the sale is transacted, if at a different time

   a. Advantages

      1. Simple method of reporting receipts and expenses

      2. Opportunities exist for timing the realization of income and deductions for expenditures

      3. Cash generally will be available when taxes are due because taxable income is realized only upon receipt of cash

   b. Disadvantages

      1. Fluctuations in income can result from year–to–year if the cooperator is forced to sell his output prior to year-end in order to pay expenses

      2. Expenses are not deductible until paid

2. Accrual method--Follows the approach that income should be accurately described each year; therefore, transactions are recorded when binding whether money changes hands or not. Changes in inventory of crops, livestock, and supplies are also included

   a. Advantages

      1. Income can be matched against expenses without the cooperator being forced to make sales prior to year-end

2. Expenses may be deducted although payments are made in the following year

3. May tend to spread income more evenly over a number of years

b. Disadvantages

1. Fails to postpone the payment of tax

2. Difficult for most farmers to use

D. Accounting period (calendar year versus fiscal year)--Usually for one year and typically corresponds to the calendar year. A fiscal year is the accounting period whether or not it begins on January 1. Although the calendar year is the most common period, it is not necessarily the best for all farm businesses. The production period should be considered in selecting an accounting period that corresponds to the flow of receipts and expenses from major enterprises. The time period selected should be the one most meaningful in analyzing the activities of the business

E. Hand records versus electronic records

1. The *Oklahoma Young Farmer Association Record Book* is a type of hand record system. Hand record systems have two major advantages:

a. Low cost

b. Simplicity

2. Electronic record systems, while being more expensive, may offer advantages to a diversified operator or an operator with many entries to record. Electronic record advantages are:

a. Time spent in recordkeeping is reduced

b. Records are complete

c. Accuracy checks are provided

d. Complete data and financial information is provided

Example: COSTFINDER, the Oklahoma State University electronic records systems

INFORMATION SHEET

III. Major components of the *Oklahoma Young Farmer Association Record Book*

A. Receipts--Section where receipts are recorded. Non-farm receipts may also go through family living sections

B. Expenditures--All disbursements are recorded in the *Oklahoma Young Farmer Record Book*. All expenditures are recorded in the expense section of the book. Non-farm spending, such as family medical expenses, may also be recorded in the family living section

C. Inventories--Are necessary to determine the earnings of a year's business. The *Oklahoma Young Farmer Record Book* contains a section to record inventories of nondepreciable items, such as livestock, feed, stored and growing crops, and crop and livestock supplies. Inventory of depreciable items is contained in the depreciation schedule

D. Depreciation schedule--Proration of assets cost over its life. This information is needed for income tax reporting. The record book contains forms for depreciation of machinery, equipment, and livestock for breeding

E. Real estate--Depreciation schedule and investment record for real estate, which includes buildings, fences, land improvements, and the owner's dwelling

F. Hired labor--Section provided not only to keep track of time worked and total wages, but also to provide a record of Federal, state and Social Security taxes withheld

G. Credit sources--Section provided to keep track of borrowings and to provide an interest record. Separate forms are provided for short-term, intermediate, and long-term loans

H. Family living--Section provided to record all receipts and expenses that are not related to the farm business itself. The forms provided have columns to separate items that are deductible for income tax reporting if deductions are itemized

I. Summary and analysis--Section provided to summarize receipts and expenditures and development analysis for the specified time period

J. Supplemental records--All information or materials not included in the section of the record book

Examples: Machinery use, fuel use, crop yield and livestock miscellaneous information

INFORMATION SHEET

IV. Posting strategies

A. Timeliness and discipline

(NOTE: Receipts and expenses should be recorded on a daily or weekly basis. This distributes the record work and keeps records up-to-date.)

B. Completeness of entries--Accurate records are needed to fill out income tax reports and to profitably study the farm business. The *Oklahoma Young Farmer Record Book* is designed to accomplish both with a minimum of effort; however, complete entries are required in order to be able to understand at a later date what was recorded

V. Specific sections of the *Oklahoma Young Farmer Association Record Book*

A. Form 1, Farm Receipts--Provides space for the net amount received on business transactions, detailed descriptions of the transaction, and covers crop sales, and miscellaneous farm income

Examples: Wheat sales, corn sales, soybean sales, government payments, custom work, patronage dividends and refunds, cash rent

FORM 1 PAGE MONTH 19__ FARM RECEIPTS

LINE	DATE	TOTAL RECEIPTS $ ¢	DETAILED DESCRIPTION to whom, what, etc.	CROP SALES KIND: write in below AMT. tons lbs. bu.								MISC. FARM RECEIPTS Gov't Paym'ts $ ¢	Custom Work $ ¢	Pat. Div., Refunds, Resales $ ¢	Cash Rent, Other $ ¢	
			subtotals brought from preceding page													
1																1
2																2

B. Form 2, Farm Receipts--A continuation of Form 1; contains sections for livestock products, and miscellaneous income

Examples: Feeder cattle, feeder pigs, custom harvesting

FORM 2 PAGE MONTH 19__ FARM RECEIPTS

LINE	LIVESTOCK PRODUCTS KIND: write in below Lbs./ DOZ quan $ ¢		MISCELLANEOUS INCOME KIND: write in below $ ¢							
1										
2										

INFORMATION SHEET

C. Form 3, Farm Receipts--Spaces provided for non-breeding livestock raised and livestock purchased for resale

FORM 3 PAGE MONTH 19__ FARM RECEIPTS

NON-BREEDING LIVESTOCK--RAISED								LIVESTOCK PURCHASED FOR RESALE								LINE
KIND: write in below								KIND: write in below								
HEAD				HEAD				HEAD				HEAD				
	lbs.	$	¢		lbs.	$	¢		lbs.	$	¢		lbs.	$	¢	
																1
																2

D. Form 4, Farm Receipts--A continuation of Form 1 and Form 2. Income items in this section may be eligible for capital gains treatment. Spaces are provided for items qualifying for this treatment and for items that do not qualify for capital gains treatment, whether it be livestock, machinery, or equipment. Space is also provided for money borrowed, which requires an additional entry on Forms 22 and 23 (Credit Sources). Additional room is provided for nonfarm receipts which require an additional entry on Form 24 or 25 (Family Living and Non-Farm Receipts and Expenditures)

FORM 4 PAGE MONTH 19__ FARM RECEIPTS

LINE	BREEDING LIVESTOCK													Mach., Equip., Bldg. Sales		Money Borrowed		Non-farm Receipts	
	HEAD				KIND: write in below														
	Qualify		Do Not Qualify																
	bot	rad	bot	rad	lbs	$	¢	lbs	$	¢	lbs	$	¢	$	¢	$	¢	$	¢
1																			
2																			

INFORMATION SHEET

E. Form 5, Enterprise Receipts--Form used for enterprise accounting; consists of spaces for three enterprises on each page

(NOTE: Determining proper enterprises for record keeping purposes is simply matching the records system to the farm situation. For example, if a cooperator has a beef operation in which he has a cow-calf enterprise and a stocker steer enterprise, instead of keeping one record on the total operation the cooperator may wish to keep separate records on each enterprise to provide a more detailed evaluation of the profitability of each enterprise. Instead of allocating equipment and overhead costs to the business in general, these may be broken down into general headings for livestock, crops or allocated among crops in order to provide a more accurate record of the profitability of each crop. Many other examples of dividing the business into enterprises may be cited; however, enterprises selected by the individual will be determined by the organization of their own farm business.)

FORM 5 **PAGE** **MONTH** **ENTERPRISE RECEIPTS**

ITEM DESCRIPTION, QUANTITY, ETC.	AMT. $	AMT. ¢	ITEM DESCRIPTION, QUANTITY, ETC.	AMT. $	AMT. ¢	ITEM DESCRIPTION, QUANTITY, ETC.	AMT. $	AMT. ¢	LINE
subtotals brought from preceeding page									
									1
									2

F. Form 7, Farm Expenditures--Form used in balancing the checkbook at the end of the month; contains a detailed description of what was bought and from whom

Examples: Hired labor, repairs, interest, feeds, seed and plants, fertilizer

FORM 7 **PAGE** **MONTH** **19__ FARM EXPENDITURES**

LINE	DATE	TOTAL COST $	TOTAL COST ¢	CHECK NO.	DETAILED DESCRIPTION WHAT WAS BOUGHT, FROM WHOM	HIRED LABOR $	HIRED LABOR ¢	REPAIRS $	REPAIRS ¢	INTEREST $	INTEREST ¢	FEED	FEED $	FEED ¢	SEEDS, PLANTS $	SEEDS, PLANTS ¢	FERT., LIME, CHEM. $	FERT., LIME, CHEM. ¢	LINE
					subtotals brought from preceeding page														
1																			1
2																			2

INFORMATION SHEET

G. Form 8, Farm Expenditures--A continuation of Form 7; consists of six expense columns

Examples: Machinery hire, supplies, breeding fees, miscellaneous expenses, veterinary medicine, storage

FORM 8 PAGE MONTH 19__ FARM EXPENDITURES

LINE	MACHINE HIRE		SUPPLIES		BREEDING FEES		MISC. EXPENSES		VET MEDICINE		FUEL AND OIL		STORAGE	
	$	¢	$	¢	$	¢	$	¢	$	¢	$	¢	$	¢
1														
2														

H. Form 9, Farm Expendtitures--A continuation of Forms 7 and 8; consists of six expense columns

Examples: Taxes, insurance, utilities, cash rent, freight and trucking, conservation expenses

FORM 9 PAGE MONTH 19__ FARM EXPENDITURES

TAXES		INSURANCE		UTILITIES		CASH RENT		FREIGHT-TRUCKING		CONSERVATION EXPENSES		LINE
$	¢	$	¢	$	¢	$	¢	$	¢	$	¢	
												1
												2

I. Form 10, Farm Expenditures--Form used for new investments which are treated as capital expenditures. Additional space is provided for non-farm expenses and investments which require an additional entry on Form 24 or 25 (Family Living, or Non-Farm Receipts and Expenditures)

Examples: Animals purchased for resale, breeding stock, machinery, equipment, land, building improvements

FORM 10 PAGE MONTH 19__ FARM EXPENDITURES

LINE	NEW INVESTMENTS														PRINCIPAL PAID ON BORR'WD FUNDS		NON-FARM EXPEN., INVEST.	
	PURCH. FOR RESALE				HEAD	LBS.	BREEDING STOCK				MACH. & EQUIP.		LAND & BLDG. IMPRV'MT					
	$	¢	$	¢			$	¢	$	¢	$	¢	$	¢	$	¢	$	¢
1																		
2																		

INFORMATION SHEET

J. Form 11, Distribution of Enterprise Expenses--Form used for enterprise accounting. Each column should correspond to those enterorises recorded in Form 5 (Distribution of Enterprise Expenditures)

FORM 11 PAGE MONTH ENTERPRISE EXPENDITURES

ITEM DESCRIPTION QUANTITY, ETC.	AMT. $	AMT. ¢	ITEM DESCRIPTION QUANTITY, ETC.	AMT. $	AMT. ¢	ITEM DESCRIPTION QUANTITY, ETC.	AMT. $	AMT. ¢	LINE
subtotals brought from preceeding page									
									1

K. Forms 13, 14, 15--Depreciation
Forms 16, 17--Inventory
Form 18--Real Estate

(NOTE: This section of the record book will be covered in detail in the next two units of instruction; specific forms will be covered at that time.)

L. Form 21, Hired Labor Record--Form used to keep necessary records on the cooperators employees. Space is provided to record employees name, address, and Social Security number. Additional space is provided for more detailed information

Examples: Date, hours worked, enterprise reference code, total wages, deductions, net paid

FORM 21 PAGE

Employee's Name								social security no.
Address								
DATE	HRS TIME WRKD	ENT. REF. CODE	TOTAL WAGES	DEDUCTIONS - reference only				NET PAID form 7 col. 25
				FEDERAL W. H.	STATE W. H.	F.I.C.A.	OTHER	

M. Form 22, Intermediate and Long-Term Loan and Interest Record--Form used to record loans of an intermediate time span (1 to 7 years) and long-term loans (over 7 years). Space is provided to record date due, total payment due, interest due, principal due, date paid, total payment paid, interest paid, principal paid, and unpaid principal balance

FORM 22 PAGE

LENDER _____ ORIGINAL AMOUNT _____
LOAN PURPOSE _____ INTEREST RATE _____
DATE ORIGINATED _____ TERMS _____

REPAYMENT SCHEDULE				REPAYMENT RECORD				
DATE DUE	TOTAL PAYMENT DUE	INTEREST DUE	PRINCIPAL DUE	DATE PD.	TOTAL PAYMENT PAID	INTEREST PAID fm. 7 col. 27	PRINCIPAL PAID fm. 10 col. 50	UNPAID PRINCIPAL BALANCE

INFORMATION SHEET

N. Form 23, Short-Term Loans and Interest Record--Form used to record borrowing over a short-term (1 year or less). Space is provided for the transaction description, item amount, gross amount borrowed, principal paid, and accumulated principal balance

FORM 23 PAGE SHORT TERM LOAN AND INTEREST RECORD
LENDER _____

DATE	TRANSACTION DESCRIPTION	BORROWINGS				maturity date	REPAYMENTS			ACCUMUL'TD PRINCIPAL BALANCE
		ITEM AMOUNT	GROSS $ BORROWED	NET $ BOR'WD (term 4, pg. 27)	INTRST RATE		TOTAL PAYMENT	INTRST PD (term 7, pg. 27)	PRINCIPAL PAID (term 10, pg. 50)	

O. Form 24, Family Living and Personal Expenditures--Form used to record family living expenses. Space is provided for a description of the transaction and total cost. Several areas are covered

Examples: Food, clothing, household operating expenses, telephone, heating fuel, utilities, household furniture, house repairs and improvements, entertainment, recreation, education, personal items

FORM 24 PAGE MONTH FAMILY LIVING AND PERSONAL EXPENDITURES

LINE	DATE	TOTAL COST	DESCRIPTION	FOOD	CLOTHING	HOUSE HOLD OPERTNG	TELE-PHONE	HEATING FUEL	UTILITIES	HOUSE-HOLD FURN'HG	HOUSE REPAIRS IMPV'MTS RENT	ENTER-TAINMENT RE-CREATION GIFTS	EDUC. AND READING	PERSON'L ITEMS	LINE
		$ ¢		$ ¢	$ ¢	$ ¢	$ ¢	$ ¢	$ ¢	$ ¢	$ ¢	$ ¢	$ ¢	$ ¢	
			Subtotals brought from preceding page												
1															1
2															2

P. Form 25, Non-Family Receipts and Expenditures--A continuation of Form 24; several columns are available for non-family receipts and expenditures

Examples: Personal car and travel expenses, insurance, medical expenses, tax deductible contributions, income tax, non-farm interest payments, non-farm principal payments, non-taxable receipts, taxable receipts, related deductible expenses

FORM 25 PAGE MONTH NON FARM RECEIPTS AND EXPENDITURES

LINE	PERSONAL CAR AND TRAVEL EXPENSE	INSURANCE LIFE NON-MED NON-FARM	INSURANCE HEALTH AND ACCIDENT	MEDICAL EXPENSES doctor, hospital, ambulance, glasses	PRESCRIPT. DRUGS. MEDICINES	DED. STATUS	TAX DEDUCT. CONTRI-BUTIONS	INCOME TAX, SOC SEC SAVINGS, INVEST	NON-FARM INTEREST PAYMENTS	NON-FARM PRINCIPAL PAYMENTS & TRANSF TO FARM ACCOUNTS	DATE	DESCRIPTION	NON-TXBL RECEIPTS transfers inherit. refunds	TAXABLE RECEIPTS wages, stock div. interest	RELATED DEDUCT. EXPEND.	LINE
	$ ¢	$ ¢	$ ¢	$ ¢	$ ¢		$ ¢	$ ¢	$ ¢	$ ¢			$ ¢	$ ¢	$ ¢	
1																1
2																2

RECORD KEEPING
UNIT II

ASSIGNMENT SHEET #1--MAKING RECORD BOOK TRANSACTIONS

In the *Oklahoma Young Farmer Association Record Book*, post the following transactions in the appropriate sections.

Jan. 1	Paid Johnathan Doe-$175 wages; withheld $14.17 S.S., and $25.98 Federal withholding tax
Jan. 2	Received $125 dividend from Co-op
Jan. 3	Purchased groceries--$65
Jan. 4	Paid electric bill--$80 (1/2 business, 1/2 family)
Jan. 5	Purchased feed from Co-op 4,000 lbs--$250
Jan. 6	Sold wheat, 2,000 bu. @$2.25--$4,500
Jan. 7	Repaid operating loan, Local State Bank--$4,500 ($500 interest, $4,000 principal)
Jan. 8	Purchased fertilizer (wheat), 8 tons @$175--$1,400
Jan. 9	Tractor repairs--$200
Jan. 10	Borrowed $2,500 from Local State Bank at 10% interest, due Jan. 9, next year
Jan. 11	Paid doctor bill--$50
Jan. 12	Spouse's paycheck--$375
Jan. 13	Purchased gasoline-200 gla. 50¢/gal.--$100 (Farm use)
Jan. 14	Paid for truck repairs--$75
Jan. 15	Paid life insurance premium--$375

ASSIGNMENT SHEET #1

FORM 1 **PAGE** **MONTH** **19 78 FARM RECEIPTS**

LINE	DATE	TOTAL RECEIPTS $ ¢	DETAILED DESCRIPTION to whom, what, etc.	CROP SALES: AMT. tons lbs. bu.	CROP SALES: KIND: write in below $ ¢	$ ¢	$ ¢	$ ¢	MISC. FARM RECEIPTS: Gov't Paym'ts $ ¢	Custom Work $ ¢	Pat. Div., Refunds, Resales $ ¢	Cash Rent, Other $ ¢	LINE
			subtotals brought from preceding page										
1													1
2													2
3													3
4													4

FORM 4 **PAGE** **MONTH** January **19 78 FARM RECEIPTS**

LINE	BREEDING LIVESTOCK: HEAD Qualify bot	Qualify rod	Do Not Qualify bot	Do Not Qualify rod	KIND: write in below lbs $ ¢	lbs $ ¢	lbs $ ¢	Mach., Equip., Bldg. Sales $ ¢	Money Borrowed $ ¢	Non-farm Receipts $ ¢
1										
2										
3										
4										

FORM 5 **PAGE** **MONTH** January **ENTERPRISE RECEIPTS**

ITEM DESCRIPTION, QUANTITY, ETC.	AMT. $ ¢	ITEM DESCRIPTION, QUANTITY, ETC.	AMT. $ ¢	ITEM DESCRIPTION, QUANTITY, ETC.	AMT. $ ¢	LINE
subtotals brought from preceding page						
						1
						2
						3

ASSIGNMENT SHEET #1

FORM 7 PAGE MONTH January 1978 FARM EXPENDITURES

LINE	DATE	TOTAL COST $	¢	CHECK NO.	DETAILED DESCRIPTION WHAT WAS BOUGHT, FROM WHOM	HIRED LABOR $	¢	REPAIRS $	¢	INTEREST $	¢	FEED	$	¢	SEEDS, PLANTS $	¢	FERT., LIME, CHEM. $	¢	LINE
					subtotals brought from preceeding page														
1																			1
2																			2
3																			3
4																			4
5																			5
6																			6
7																			7
8																			8
9																			9
10																			10
11																			11

FORM 8 PAGE MONTH January 19 78 FARM EXPENDITURES

LINE	MACHINE HIRE $	¢	SUPPLIES $	¢	BREEDING FEES $	¢	MISC. EXPENSES $	¢	VET MEDICINE $	¢	FUEL AND OIL $	¢	STORAGE $	¢
1														
2														
3														
4														
5														
6														
7														
8														
9														

FORM 10 PAGE MONTH January 1978 FARM EXPENDITURES

LINE	NEW INVESTMENTS: PURCH. FOR RESALE $	¢	$	¢	HEAD	LBS.	BREEDING STOCK $	¢	$	¢	MACH. & EQUIP. $	¢	LAND & BLDG. IMPRV'MT $	¢	PRINCIPAL PAID ON BORR'WD FUNDS $	¢	NON-FARM EXPEN., INVEST. $	¢
1																		
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		

ASSIGNMENT SHEET #1

FORM 21 PAGE

Employee's Name Johnathan Doe								social security no.
Address								
DATE	HRS TIME WRKD	ENT. REF. CODE	TOTAL WAGES	DEDUCTIONS - reference only				NET PAID form 7 col. 25
				FEDERAL W. H.	STATE W. H.	F.I.C.A.	OTHER	

FORM 23 PAGE

SHORT TERM LOAN AND INTEREST RECORD

LENDER _____

DATE	TRANSACTION DESCRIPTION	BORROWINGS				maturity date	REPAYMENTS			ACCUMUL'TD PRINCIPAL BALANCE
		ITEM AMOUNT	GROSS $ BORROWED	NET $ BOR'WD form 4 col 22	INTRST RATE		TOTAL PAYMENT	INTRST PD form 7 col 27	PRINCIPAL PAID form 10 col. 50	

FORM 24 PAGE MONTH January FAMILY LIVING AND PERSONAL EXPENDITURES

LINE	DATE	TOTAL COST	DESCRIPTION	FOOD	CLOTHING	HOUSE HOLD OPERTNG	TELEPHONE	HEATING FUEL	UTILITIES	HOUSEHOLD FURNTG	HOUSE REPAIRS IMPV'MTS RENT	ENTERTAINMENT RECREATION GIFTS	EDUC. AND READING	PERSONAL ITEMS	LINE
		$ ¢		$ ¢	$ ¢	$ ¢	$ ¢	$ ¢	$ ¢	$ ¢	$ ¢	$ ¢	$ ¢	$ ¢	
			Subtotals brought from preceding page												
1															1
2															2
3															3
4															4

FORM 25 PAGE MONTH January NON FARM RECEIPTS AND EXPENDITURES

LINE	PERSONAL CAR AND TRAVEL EXPENSE	INSURANCE LIFE NON-FARM	INSURANCE HEALTH AND ACCIDENT	MEDICAL EXPENSES (doctor, hospital, surgical, dental, glasses)	PRESCRIPT. DRUGS. MEDICINES	MEDICAL this page	TAX DEDUCT. CONTRI-BUTIONS	INCOME TAX, SOC. SEC. SAVINGS, INVEST.	NON-FARM INTEREST PAYMENTS	NON-FARM PRINCIPAL PAYMENTS & TRANSF'D TO FARM ACCOUNTS	DATE	DESCRIPTION	NON-TXBL RECEIPTS transfers inherit. refunds	TAXABLE RECEIPTS wages stock div. interest	RELATED DEDUCT. EXPEND.	LINE
	$ ¢	$ ¢	$ ¢	$ ¢	$ ¢		$ ¢	$ ¢	$ ¢	$ ¢			$ ¢	$ ¢	$ ¢	
1																1
2																2
3																3
4																4

RECORD KEEPING
UNIT II

ANSWERS TO ASSIGNMENT SHEET #1

FORM I **PAGE** **MONTH** **19 78 FARM RECEIPTS**

LINE	DATE	TOTAL RECEIPTS $	¢	DETAILED DESCRIPTION to whom, what, etc.	CROP SALES AMT. tons lbs. bu.	KIND write in below $	¢	$	¢	$	¢	$	¢	MISC. FARM RECEIPTS Gov't Paym'ts. $	¢	Custom Work $	¢	Pat. Div., Refunds, Resales $	¢	Cash Rent, Other $	¢	LINE
				subtotals brought from preceding page																		
1	2	125	00	Dividend from Co-Op														125	00			1
2	6	4500	00	Wheat Sales	2000	4500	00															2
3	10	2500	00	Loan from Local Bank																		3
4	12	375	00	Spouse's Paycheck																		4

FORM 4 **PAGE** **MONTH** January **19 78 FARM RECEIPTS**

LINE	BREEDING LIVESTOCK HEAD Qualify bot	red	Do Not Qualify bot	red	KIND: write in below lbs	$	¢	lbs	$	¢	lbs	$	¢	Mach., Equip., Bldg. Sales $	¢	Money Borrowed $	¢	Non-farm Receipts $	¢
1																			
2																			
3																2500	00		
4																		375	00

FORM 5 **PAGE** **MONTH** January **ENTERPRISE RECEIPTS**

Wheat									LINE
ITEM DESCRIPTION, QUANTITY, ETC.	AMT. $	¢	ITEM DESCRIPTION, QUANTITY, ETC.	AMT. $	¢	ITEM DESCRIPTION, QUANTITY, ETC.	AMT. $	¢	
subtotals brought from proceeding page									
									1
2,000 bu @ 2.25	4500	00							2
									3

FORM 7 **PAGE** **MONTH** January **19__ FARM EXPENDITURES**

LINE	DATE	TOTAL COST $	¢	CHECK NO.	DETAILED DESCRIPTION WHAT WAS BOUGHT, FROM WHOM	HIRED LABOR $	¢	REPAIRS $	¢	INTEREST $	¢	FEED Qts.	$	¢	SEEDS, PLANTS $	¢	FERT., LIME, CHEM. $	¢	LINE
					subtotals brought from preceeding page														
1		164	76		Wages for John Doe	164	76												1
2		65	00		Groceries														2
3		80	00		Electric Bill (⅓ Farm)														3
4		250	00		Co-Op Feed							4000	250	00					4
5		4500	00		Operating Loan					500	00								5
6		1400	00		Fertilizer for Wheat														6
7		200	00		Tractor Repairs			200	00										7
8		50	00		Doctor Bill														8
9		100	00		Gasoline 200 @ 50¢														9
10		75	00		Truck Repair			75	00										10
11		375	00		Life Insurance														11

FORM 8 **PAGE** **MONTH** January **19__ FARM EXPENDITURES**

LINE	MACHINE HIRE $	¢	SUPPLIES $	¢	BREEDING FEES $	¢	MISC. EXPENSES $	¢	VET MEDICINE $	¢	FUEL AND OIL $	¢	STORAGE $	¢
1														
2														
3							40	00						
4														
5														
6														
7														
8														
9							100	00						

FORM 10 **PAGE** **MONTH** January **19 78 FARM EXPENDITURES**

LINE	NEW INVESTMENTS: PURCH. FOR RESALE $	¢	$	¢	HEAD	LBS.	BREEDING STOCK $	¢	$	¢	MACH. & EQUIP. $	¢	LAND & BLDG. IMPRV'MT $	¢	PRINCIPAL PAID ON BORR'WD FUNDS $	¢	NON-FARM EXPEN., INVEST. $	¢
1																		
2																	65	00
3																	40	00
4																		
5															4000	00		
6																		
7																		
8																	50	00
9																		
10																		
11																	375	00

FORM 21 **PAGE**

Employee's Name Johnathan Doe								social security no.
Address								
DATE	HRS TIME WRKD	ENT. REF. CODE	TOTAL WAGES	DEDUCTIONS - reference only				NET PAID form 7 col. 25
				FEDERAL W. H.	STATE W. H.	F.I.C.A.	OTHER	
1-1			175.00	25.98		14.17		134.85

SHORT TERM LOAN AND INTEREST RECORD

FORM 23 **PAGE** **LENDER** Local State Bank

DATE	TRANSACTION DESCRIPTION	BORROWINGS				REPAYMENTS				ACCUMUL'TD PRINCIPAL BALANCE
		ITEM AMOUNT	GROSS $ BORROWED	NET $ BOR'WD form 4 col. 22	INTRST RATE	maturity date	TOTAL PAYMENT	INTRST PD form 7 col. 27	PRINCIPAL PAID form 10 col. 50	
1-7	Repay Operating Ln.					1-7-78	4500.00	500.00	4000.00	4000.00
1-10	Operating Loan			2500.00	10%	1-9-78				

FORM 24 **PAGE** **MONTH** January **FAMILY LIVING AND PERSONAL EXPENDITURES**

LINE	DATE	TOTAL COST	DESCRIPTION	FOOD	CLOTHING	HOUSE HOLD OPERTNG	TELEPHONE	HEATING FUEL	UTILITIES	HOUSEHOLD FURNTG	HOUSE REPAIRS IMPV'MTS RENT	ENTERTAINMENT RECREATION GIFTS	EDUC. AND READING	PERSONAL ITEMS	LINE
		$ ¢	Subtotals brought from preceding page	$ ¢	$ ¢	$ ¢	$ ¢	$ ¢	$ ¢	$ ¢	$ ¢	$ ¢	$ ¢	$ ¢	
1	3	65 00	Groceries	65 00											1
2	4	40 00	Utilities (Home Half of Total Bill)						40 00						2
3	11	50 00	Doctor Bill												3
4	15	375 00	Life Insurance												4

FORM 25 **PAGE** **MONTH** January **NON FARM RECEIPTS AND EXPENDITURES**

LINE	PERSONAL CAR AND TRAVEL EXPENSE	INSURANCE LIFE NON-BUS. NON-FARM	INSURANCE HEALTH AND ACCIDENT	MEDICAL EXPENSES doctor, hospital, ambulance, dentist	PRESCRIPT. DRUGS, MEDICINES	SOC. SEC. TAXES	TAX DEDUCT. CONTRI-BUTIONS	INCOME TAX, SOC. SEC. LIVNGS. INVEST.	NON-FARM INTEREST PAYMENTS	NON-FARM PRINCIPAL PAYMENTS TRANSF TO FARM ACCOUNTS	DATE	DESCRIPTION	NON-TXBL RECEIPTS transfers inherit. refunds	TAXABLE RECEIPTS wages, stock div., interest	RELATED DEDUCT. EXPEND.	LINE
	$ ¢	$ ¢	$ ¢	$ ¢	$ ¢	$ ¢	$ ¢	$ ¢	$ ¢	$ ¢			$ ¢	$ ¢	$ ¢	
1											12	Spouse's Paycheck		375 00		1
2																2
3				50 00												3
4		375 00														4

INVENTORY
UNIT III

UNIT OBJECTIVE

After completion of this unit, the cooperator should be able to discuss purposes and benefits of keeping farm inventory records and discuss components of the inventory process. The cooperator should be able to distinguish between inventory and depreciation. This knowledge will be evidenced by demonstrating the use of proper procedures in posting inventory values in the record book, and actual use on the farm.

SPECIFIC OBJECTIVES

After completion of this unit, the cooperator should be able to:

1. List purposes and benefits of keeping inventory records.
2. Explain principles involved in making physical count.
3. Discuss methods of valuation for farm inventories.
4. Distinguish between inventory values and values on the depreciation schedule.
5. Identify components of inventory accounts within the *Oklahoma Young Farmer Association Record Book*.
6. Demonstrate posting inventories in the *Oklahoma Young Farmer Association Record Book*.

INVENTORY
UNIT III

SUGGESTED ACTIVITIES

I. Suggested activities for the instructor:

A. Provide cooperator with objective sheet.

B. Provide cooperator with information and assignment sheets.

C. Make transparencies.

D. Discuss unit and specific objectives.

E. Discuss information and assignment sheets.

II. Instructional materials:

A. Objective sheet

B. Information sheet

C. Assignment Sheet #1--Posting Inventories

D. Answers to assignment sheet

III. Unit references:

A. Osburn, Donald D., and Schneeberger, Kenneth. *Modern Agriculture Management*. Englewood Cliffs, New Jersey: Prentice-Hall, 1978.

B. James, Sydney C., and Stoneberg, Everett. *Farm Accounting and Business Analysis*. Ames, Iowa: Iowa State University Press, 1976.

C. Hopkins, John A., and Heady, Earl O. *Farm Records and Accounting*. Ames, Iowa: Iowa State University Press, 1967.

D. Castle, Emery N., and Becker, Manning H. *Farm Business Management*. New York: The Macmillan Company, 1967.

E. McKenzie, B. A., et al. *Planning Grain-Feed Handling*, MWPS-13. Ames, Iowa: Midwest Plan Service, 1968.

F. *Oklahoma Young Farmer Association Record Book*.

INVENTORY
UNIT III

INFORMATION SHEET

I. Purposes and benefits of keeping inventory records

A. Obtains a true picture of net worth

B. Reflects noncash income and expenses

C. Provides a management tool

D. Provides for the valuation and depreciation or appreciation of machinery, livestock, buildings, other equipment, and farm supplies

E. Helps in estate planning and settlement

F. Aids credit purposes

II. Principles involved in making physical count

A. Quantities of items should be measured in units that are commonly used to aid in establishing values

Examples: Bushels for small grains, hundredweight for market livestock, gallon for fuel

B. Like items should be grouped according to the contribution to the business or their place in it

Examples: All livestock should be grouped under one classification and further divided by type, age, and/or purpose; farm machinery should be grouped and divided by purpose or use. The divisions should be meaningful and have a purpose. This will be dictated by the farm analysis the operator wishes to make

(NOTE: Converting measured quantities into meaningful units can be troublesome. It may be necessary in the inventory process to measure the quantity of grain on hand in cubic feet, count the number of bales of hay in the barn, measure the cubic feet, measure the depth of corn in the silo, and other similar problems. Tables and conversion formulas that facilitate this process are available. Even though measurement under this method is not exact, it is usually accurate enough for practical purposes.)

INFORMATION SHEET

Examples:

Approximate storage capacity of round steel bulk feed tanks.

Description	Approximate Overall Height-Feet	Tonnage Capacities Materials Weighing 30#/cu ft	40#/cu ft	50#/cu ft	Approximate Total Capacity cu ft	Bu
6' diameter-	10 - 10½	2.0	2.7	3.4	135	108
center draw off,	10½ - 13	3.1	4.2	5.3	210	166
60° hopper,	15½ - 16	4.2	5.7	7.1	285	228
20-24" slide	18 - 18½	5.4	7.2	9.0	360	288
valve clearance	20 - 20½	6.2	8.6	10.4	415	322
6' diameter-	14½ - 15	2.8	3.7	4.7	187	150
side draw-off,	17 - 17½	3.9	5.2	6.6	263	210
60° hopper, 24"	19½ - 20	5.0	6.7	8.4	338	270
slide valve	22½ - 23	6.1	8.2	10.3	413	330
	25 - 25½	7.3	9.7	12.1	487	390
9' diameter-	16½ - 17	8.4	11.2	14.0	561	413
center draw off,	19½ - 20	11.0	14.6	18.3	730	583
60° hopper, 24"	22 - 22½	13.5	18.0	22.5	900	720
slide valve	24½ - 25	16.0	21.3	26.7	1067	853
clearance	27½ - 28	18.6	24.7	30.9	1236	990
12' diameter-	20 - 20½	16.3	21.7	27.1	1085	870
center draw off,	22½ - 23	20.7	27.7	34.6	1383	1110
60° hopper, 24"	25½ - 26	25.2	33.6	42.0	1681	1345
slide valve	28 - 28½	29.7	39.6	49.5	1980	1585
clearance	30 - 30½	34.2	45.6	57.0	2278	1820
	33 - 33½	38.7	51.5	64.4	2577	2060
	36 - 36½	43.1	57.5	71.9	2875	2300
	38½ - 39	47.6	63.5	79.3	3174	2540
	41½ - 42	52.0	69.4	86.8	2472	2780

Storage capacity for common round bins.

Diameter in feet	Bu per foot of height	Capacities for Selected Depths in ft 11	13	16	19
14	125	1375	1625	2000	2375
18	203	2200	2635	3250	3850
21	277	3050	3600	4400	5300
24	362	4000	4700	5800	6900
27	458	5050	5950	7300	8700
30	565	6215	7345	9040	10735
36	814	8950	10600	13000	15450
40	1005	11050	13050	16100	19100

*Does not include space above eave line. Based on 15.5 MC corn and 1.25 cu ft per bushel.

All examples reprinted with permission from MWPS-13, Planning Grain-Feed Handling, Ames, IA 50011.

INFORMATION SHEET

C. Entire inventory should be taken on a single day. If this is not feasible, it should be taken as of a single date

Example: If the inventory date is December 31 but the physical count is not made until January 5, a calf born on January 2 should not be included in the inventory.

III. Methods of valuation for farm inventories

A. Market cost--Price at which an item was purchased on the market. This method works particularly well for items that have been purchased recently and will be used within a relatively short period of time

Examples: Feed, fuel, fertilizer, seed

B. Net market price--Value of an inventory item at the market place, less transportation and marketing changes; the money the farmer could bring home from the sale of a product. This method works particularly well for items that are held primarily for sale or for which a well-established market price. This method may be useful in particular situations for valuing land, machinery, breeding livestock, and other items not being held for sale

Examples: Market livestock, farm-produced crops

C. Cost or market value--The cost of producing an item, or its original purchase price, compared to the current market price; the lower of the two amounts is chosen. This valuation method is closely related to the market cost and net market price methods. The major advantage of this method is conservatism. However, its user may make mistakes when prices are increasing as well as decreasing. The method is probably too conservative when prices are increasing and not conservative enough when they are falling

D. Farm production cost--The cost of producing an asset of the farm. Production cost should not include profit, interest on investment, or the opportunity cost of the operator's labor and management. Generally, this method is most useful when valuing assets that have been produced on the farm and will be used in other farm production activities

Examples: Breeding livestock that have been produced on the farm; standing crops may be valued in terms of their estimated yield multiplied by the expected price adjusted for harvesting costs and uncertainty of harvest

E. Cost minus depreciation--Investment properties that provide services to the business for a period longer than one year and become less valuable in the process. These items take the form of prepaid expenses in that initial purchase price is not all used in one year but allocated over the life of the asset

Examples: Buildings, machinery, fences, purchased breeding livestock

INFORMATION SHEET

F. Cost minus depletion--Valuing a stock asset such as a gravel pit. Value of the asset changes in accordance with the amount of resource displaced or removed during the accounting period

Examples: Timber stands, mineral deposits, oil and gas wells

IV. Inventory values versus values on depreciation schedule

A. Inventory value--Value of an item in the inventory account does not need to be the same as its value in the depreciation schedule. The inventory is designed to give current value of the asset for computing net worth and for analysis purposes

B. Depreciation value--A method of prorating the cost of a working asset over its productive life for tax purposes. The principal reason for this difference in value is the appreciation of capital assets

(NOTE: Depreciation will be discussed in detail in another unit of instruction.)

V. Inventory account components in the *Oklahoma Young Farmer Association Record Book*

A. Form 13, Depreciation Schedule for Machinery and Equipment--Form where the depreciation schedule of machinery and equipment inventory account of machinery and equipment is contained

FORM 13 PAGE DEPRECIATION SCHEDULE: _____ MACHINERY AND EQUIPMENT

LINE	DATE ACQUIRED	ITEM DESCRIPTION KIND OF MACHINE, MAKE, MODEL, SIZE	ID NO	NEW OR USED	INVEST. CREDIT	COST INFORMATION: REM'NG BOOK VALUE OF TRADE-IN	COST INFORMATION: CASH DIFF. PAID	COST INFORMATION: TOTAL COST BASIS	ADDITI. FIRST YEAR DEPREC.	SALVAGE VALUE	DEPRECIATION INFORMATION: BALANCE FOR REGULAR DEPREC	LIFE	METHOD	ANNUAL DEPREC % OR $	DEPREC. TAKEN IN PRIOR YEARS	LINE
1																1
2																2

B. Form 14, Depreciation Schedule for Machinery and Equipment--Continuation of Form 13. Space is provided to record estimated value at the start of the accounting period, and to record the estimated value at the end of the current accounting period and three subsequent accounting periods. Space is also provided to record the estimated current value of the item

FORM 14 PAGE DEPRECIATION SCHEDULE: _____ MACHINERY AND EQUIPMENT (CONT.)

LINE	REM'NG BK VAL AT START OF YEAR	END 19__: DEPREC THIS YEAR	END 19__: REM'NG BOOK VALUE	END 19__: DEPREC THIS YEAR	END 19__: REM'NG BOOK VALUE	END 19__: DEPREC THIS YEAR	END 19__: REM'NG BOOK VALUE	END 19__: DEPREC THIS YEAR	END 19__: REM'NG BOOK VALUE	ESTIMATED CURRENT CASH VALUE: START 19__	END 19__	END 19__	END 19__	END 19__	LINE
1															1
2															2

C. Form 15, Depreciation Schedule Livestock for Breeding--Depreciation schedule used for breeding livestock and as an inventory account of purchased livestock

INFORMATION SHEET

FORM 15 PAGE DEPRECIATION SCHEDULE:_____ LIVESTOCK FOR BREEDING

LINE	Date Acq.	I.D. or Lot No.	Item Description	Head in Lot when Acq.	Investment Credit	New or Used	PER HEAD DATA: Cost Basis	Salvg. Value	Bal. for Depr.	Life	Method	Annual Depr. % or $	START OF 19_ _: Per Head: Depr. in Prior Years	Rem. Book Value	Head: On Hand	Per Lot: Depr. in Prior Years	Rem. Book Value	END 19_ _: Per Head: Depr. This Year	Rem. Book Value	Head: Sold or Died	Head: On Hand	Per Lot: Depr. This Year	Rem. Book Value	LINE
1																								1
2																								2

D. Form 16, Depreciation Schedule Livestock for Breeding--Continuation of Form 15. The last section of Form 16 is used as the inventory account

FORM 16 PAGE DEPRECIATION SCHEDULE:..... LIVESTOCK FOR BREEDING (con't)

LINE	END 19.. PER HEAD: Depr. This Year	Rem. Book Value	HEAD: Sold or Died	On Hand	PER LOT: Depr. This Year	Rem. Book Value	END 19.. PER HEAD: Depr. This Year	Rem. Book Value	HEAD: Sold or Died	On Hand	PER LOT: Depr. This Year	Rem. Book Value	END 19.. PER HEAD: Depr. This Year	Rem. Book Value	HEAD: Sold or Died	On Hand	PER LOT: Depr. This Year	Rem. Book Value	ESTIMATED CURRENT CASH VALUE PER LOT: START 19..	END 19..	END 19..	END 19..	END 19..	LINE
1																								1
2																								2

E. Form 17, Inventory of Livestock--The inventory of all livestock, including livestock purchased or raised, and breeding or non-breeding. Space is provided for the beginning accounting period, the end of the beginning accounting period, and the end of the following three accounting periods. Methods of valuation of livestock may differ between types of livestock

Examples: Raised breeding livestock may be valued by farm production cost or net market price. Stocker and feeder livestock, if purchased, may be valued by the market cost method (adjusted for changes in value after purchase) or if raised, may be valued by the farm production cost method

INFORMATION SHEET

FORM 17 INVENTORY OF LIVESTOCK

LINE		START 19__				END 19__				END 19__			
		NO. HEAD	TOTAL WT.	PRICE PER UNIT	TOTAL VALUE	NO. HEAD	TOTAL WT.	PRICE PER UNIT	TOTAL VALUE	NO. HEAD	TOTAL WT.	PRICE PER UNIT	TOTAL VALUE
	SWINE												
1	Purch. Breeding F. 14/15												
2	Rsd. Breeding - Sows												
3	- Gilts												
4	- Boars												
5	TOTAL BREEDING SWINE												
6	Hogs												
7	Pigs												
8	Gilts												
9	Boars												
10	TOT. NON-BREED. SWINE												
11	TOTAL SWINE												
	BEEF												
12	Purch Breeding F. 14/15												
13	Rsd. Breeding - Cows												
14	- Heifers												
15	- Bulls												
16	TOTAL BREEDING BEEF												
17	1-2 years Heifers												
18	Bulls												
19	weaned, Heifers												
20	Bulls												
21	Steers												
22	Sucking Calves												
23	TOTAL NON-BREED. BEEF												
24	TOTAL BEEF												
	DAIRY												
25	Purch Breeding F. 14/15												
26	Rsd. Breeding - Cows												
27	Bred Heifers												
28	Open Heifers												
29	Bulls												
30	TOTAL BREEDING DAIRY												
31	Heifers												
32	Bulls												
33	Steers												
34	Calves												
35	TOT. NON-BREED. DAIRY												
36	TOTAL DAIRY												
	OTHER												
37													
38													
39	TOT. BREEDING												
40													
41													
42	TOT. NON-BREEDING												
43	TOTAL												
44	FORM TOTAL												

F. Form 18, Inventory of Feed, Stored and Growing Crops and Crop and Livestock Supplies--Is arranged in much the same way as Form 17. Major headings within Form 18 are:

1. Purchased feeds--Section provided to record all feeds that have been purchased. Items included would be prepared feeds, grains, protein supplements, vitamins, minerals, and salt. The most common method of valuation of these type of inputs is the market cost method

2. Stored crops--Space provided to record all raised crops which have been stored. The common method of valuation of crops held for sale is net market price. For crops to be used as feed, methods used are cost of production and net market price

INFORMATION SHEET

3. Growing crops--Section provided to record the dollars invested in growing crops. Method of valuation is the farmers production cost

4. Crop supplies--Section provided to record all supplies on hand to be used in the production of crops. Items recorded in this section include seed, fertilizer, and fuel. Market cost is the most common method of valuation

5. Livestock supplies--Section provided to record other supplies that do not fit into one of the previously mentioned categories. The most common method of valuation is market cost

INVENTORY OF FEED, STORED & GROWING CROPS AND CROP & LIVESTOCK SUPPLIES

FORM 18

LINE		START 19__			END 19__			END 19__		
		QUANT.	PRICE PER UNIT	TOTAL VALUE	QUANT.	PRICE PER UNIT	TOTAL VALUE	QUANT.	PRICE PER UNIT	TOTAL VALUE
	PURCHASED FEEDS									
1	Prepared Feeds									
2										
3	Protein Supplements									
4										
5	Vitamins, Minerals									
6										
7	TOTAL PURCHASED FEEDS									
	STORED CROPS									
8	Corn									
9	Wheat									
10	Grain Sorghum									
11	Soybeans									
12	Cotton									
13	Silage									
14										
15	Hay									
16										
17	Straw									
18	TOTAL STORED CROPS									
	GROWING CROPS									
19										
20										
21	TOTAL GROWING CROPS									
	CROP SUPPLIES									
22	Seeds									
23										
24	Fertilizer, Lime Applied									
25	Fertilizer Stored									
26										
27	Herbicides									
28										
29	Insecticides									
30	Fungicides									
31	Twine, Etc.									
32	Fuel									
33										
34	Oil									
35	Grease									
36	TOTAL CROP SUPPLIES									
	LIVESTOCK SUPPLIES									
37	Veterinary Supplies									
38										
39	Bedding									
40	Other Supplies									
41										
42										
43	TOTAL LIVESTOCK SUPPL.									
44	FORM TOTAL									

INFORMATION SHEET

G. Form 19, Real Estate Investment and Depreciation Record--Inventory of real estate contained within the real estate investment and depreciation schedule. Information on the form includes tract number, legal description, date acquired, purchase price, settlement fees, and debt assumed

FORM 19 REAL ESTATE INVESTMENT AND DEPRECIATION RECORD

Tract No. _____ Date Acquired _____

Legal Description _____

_____

_____

Other Description _____

Original Basis Allocated to Land:

Purchase price, carry over basis, other _____

Settlement fees _____

Debt assumed _____

Other _____

Total Original Basis _____

less portion of basis allocated to buildings and improvements (-) _____

less reductions in basis (-) _____

Original Basis Allocated to Land _____

H. Form 20, Real Estate Investment and Depreciation Record--Continuation of Form 19. Space is provided for buildings, improvements, investment credit, total cost basis, depreciation, and ending value

FORM 20
TRACT NO.

REAL ESTATE INVESTMENT AND DEPRECIATION RECORD

Line	Date Acquired	ITEM DESCRIPTION (kind, size, location) Buildings & Improvements	Investment Credit	Total Cost Basis	Life	Method	Annual Rate % or $	Depr. Taken in Prior Years	End 19 __			End 19 __		Est'd Current Value	Line
									Rem. Val. at start of year	Depr. this Year	Rem. Book Value	Depr. this Year	Rem. Book Value		
1															1
2															2
3															3
4															4
5															5
6															6
7															7
8															8
9															9
10															10
11		Bldg. & Depreciable Improvement			Total Depreciation										11
12		Land								•••••		•••••			12
13		Total													13

INVENTORY
UNIT III

ASSIGNMENT SHEET #1--POSTING INVENTORIES

Inventory is essential if an analysis of the farm is to be completed. Assume you are taking inventory and you discover the following items:

1. Tractor, 80 hp, acquired January 1, 1972; estimated current value--$12,000
2. Plow, 4 bottom, acquired Janury 1, 1973; estimated current value--$1,500
3. Springtooth harrow, acquired January 1, 1973; estimated current value--$2,500
4. Offset disk, acquired July 1, 1975; estimated current value--$3,250
5. Drill, acquired April 1, 1974; estimated current value--$1,500
6. Truck, 3/4 ton, acquired September 1, 1974; estimated current value--$2,000
7. Stocktrailer, acquired January 1, 1975; estimated current value--$2,500
8. 10 cows purchased as 2-year-old heifers on April 1, 1973; estimated current value--$2,500
9. 1 bull purchased when 3-years-old on September 1, 1973, estimated current value--$2,000
10. 8 cows purchased as 2-year-old heifers on January 1, 1975; estimated current value--$2,000
11. 7 cows purchased as 2-year-old heifers on January 1, 1977; estimated current value--$1,750
12. 5 raised breeding cows; estimated current value--$1,250
13. 10 heifers, average weight 425 lbs.; estimated market price $40/cwt., total value--$1,700
14. 50 steers, average weight 450 lbs.; estimated market price--$45/cwt., total value--$10,125
15. 5 tons of creep feed purchased for $125/ton; total value--$625
16. 3,000 bushels of wheat stored; estimated market price $2.40/bushel, total value --$7,200
17. 10 tons of prairie hay, produced on the farm; estimated market price $45/ton, total value--$450
18. 160 acres of farmland purchased January 1, 1969, at $400/acre; fences around this land had a total cost basis of $300
19. On April 1, 1969, built a machinery shed; total cost basis--$7,500

ASSIGNMENT SHEET #1

20. 320 acres of pasture purchased on January 1, 1970, at $200/acre; fences around this land had a total cost basis of $500

21. On July 1, 1970, built a barn, total cost basis--$9,000; on September 1, 1970, built corrals with a total cost basis of $1,500

Post the inventory in proper sections of the *Oklahoma Young Farmer Association Record Book*

ASSIGNMENT SHEET #1

FORM 13 PAGE DEPRECIATION SCHEDULE: _____ MACHINERY AND EQUIPMENT

LINE	DATE ACQUIRED	ITEM DESCRIPTION KIND OF MACHINE, MAKE, MODEL, SIZE	I.D. NO.	NEW OR USED	INVEST. CREDIT	COST INFORMATION: REM'NG BOOK VALUE OF TRADE-IN	COST INFORMATION: CASH DIFF. PAID	COST INFORMATION: TOTAL COST BASIS	ADDITI. FIRST YEAR DEPREC.	SALVAGE VALUE	DEPRECIATION INFORMATION: BALANCE FOR REGULAR DEPREC.	DEPRECIATION INFORMATION: LIFE	DEPRECIATION INFORMATION: METHOD	DEPRECIATION INFORMATION: ANNUAL DEPREC % or $	DEPRECIATION INFORMATION: DEPREC. TAKEN IN PRIOR YEARS	LINE
1																1
2																2
3																3
4																4
5																5
6																6
7																7

FORM 14 PAGE DEPRECIATION SCHEDULE: _____ MACHINERY AND EQUIPMENT (CONT.)

LINE	REM'NG BK. VAL. AT START OF YEAR	END 19__: DEPREC THIS YEAR	END 19__: REM'NG BOOK VALUE	END 19__: DEPREC. THIS YEAR	END 19__: REM'NG BOOK VALUE	END 19__: DEPREC. THIS YEAR	END 19__: REM'NG BOOK VALUE	END 19__: DEPREC. THIS YEAR	END 19__: REM'NG BOOK VALUE	ESTIMATED CURRENT CASH VALUE: START 19__	END 19__	END 19__	END 19__	END 19__	LINE
1															1
2															2
3															3
4															4
5															5
6															6
7															7

FORM 15 PAGE DEPRECIATION SCHEDULE: _____ LIVESTOCK FOR BREEDING

LINE	Date Acq.	I.D. or Lot No.	Item Description	Head in Lot when Acq.	Investment Credit	New or Used	PER HEAD DATA: Cost Basis	Selvg. Value	Bal. for Depr.	Life	Method	Annual Depr. % or $	START OF 19__: Per Head: Depr. in Prior Years	Per Head: Rem. Book Value	Lot: Head On Hand	Lot: Depr. in Prior Years	Lot: Rem. Book Value	END 19__: Per Head: Depr. This Year	Per Head: Rem. Book Value	Lot: Head Sold or Died	Lot: Head On Hand	Lot: Depr. This Year	Lot: Rem. Book Value	LINE
1																								1
2																								2
3																								3
4																								4

ASSIGNMENT SHEET #1

FORM 16 PAGE DEPRECIATION SCHEDULE:..... LIVESTOCK FOR BREEDING (con't)

LINE	END 19..						END 19..						END 19..						ESTIMATED CURRENT CASH VALUE					LINE
	PER HEAD		HEAD		PER LOT		PER HEAD		HEAD		PER LOT		PER HEAD		HEAD		PER LOT		PER LOT					
	Depr. This Year	Rem. Book Value	Sold or Died	On Hand	Depr. This Year	Rem. Book Value	Depr. This Year	Rem. Book Value	Sold or Died	On Hand	Depr. This Year	Rem. Book Value	Depr. This Year	Rem. Book Value	Sold or Died	On Hand	Depr. This Year	Rem. Book Value	START 19..	END 19..	END 19..	END 19..	END 19..	
1																								1
2																								2
3																								3
4																								4

FORM 17 INVENTORY OF LIVESTOCK

LINE		START 19__				END 19__				END 19__				END 19__				END 19__				LINE
		NO. HEAD	TOTAL WT.	AVG. WT. per HD	TOTAL VALUE	NO. HEAD	TOTAL WT.	AVG. WT. per HD	TOTAL VALUE	NO. HEAD	TOTAL WT.	AVG. WT. per HD	TOTAL VALUE	NO. HEAD	TOTAL WT	AVG. WT. per HD	TOTAL VALUE	NO. HEAD	TOTAL WT.	AVG. WT. per HD	TOTAL VALUE	
	SWINE																					
1	Purch. Breeding F. 14/15																					1
2	Red. Breeding - Sows																					2
3	- Gilts																					3
4	- Boars																					4
5	TOTAL BREEDING SWINE																					5
6	Hogs																					6
7	Pigs																					7
8	Gilts																					8
9	Boars																					9
10	TOT. NON-BREED. SWINE																					10
11	TOTAL SWINE																					11
	BEEF																					
12	Purch. Breeding F. 14/15																					12
13	Red. Breeding - Cows																					13
14	- Heifers																					14
15	- Bulls																					15
16	TOTAL BREEDING BEEF																					16
17	1-2 years Heifers																					17
18	Bulls																					18
19	weaned, Heifers																					19
20	Bulls																					20
21	Steers																					21
22	Sucking Calves																					22
23	TOTAL NON-BREED. BEEF																					23
24	TOTAL BEEF																					24
	DAIRY																					
25	Purch. Breeding F. 14/15																					25
26	Red. Breeding - Cows																					26
27	Bred Heifers																					27
28	Open Heifers																					28
29	Bulls																					29
30	TOTAL BREEDING DAIRY																					30
31	Heifers																					31
32	Bulls																					32
33	Steers																					33
34	Calves																					34
35	TOT. NON-BREED. DAIRY																					35
36	TOTAL DAIRY																					36
	OTHER																					
37																						37
38																						38
39	TOT. BREEDING																					39
40																						40
41																						41
42	TOT. NON-BREEDING																					42
43	TOTAL																					43
44	FORM TOTAL																					44

ASSIGNMENT SHEET #1 .

INVENTORY OF FEED, STORED & GROWING CROPS AND CROP & LIVESTOCK SUPPLIES

FORM 18

LINE		START 19 _ _			END 19 _ _			END 19 _ _		
		QUANT.	PRICE PER UNIT	TOTAL VALUE	QUANT.	PRICE PER UNIT	TOTAL VALUE	QUANT.	PRICE PER UNIT	TOTAL VALUE
	PURCHASED FEEDS									
1	Prepared Feeds									
2										
3	Protein Supplements									
4										
5	Vitamins, Minerals									
6										
7	TOTAL PURCHASED FEEDS									
	STORED CROPS									
8	Corn									
9	Wheat									
10	Grain Sorghum									
11	Soybeans									
12	Cotton									
13	Silage									
14										
15	Hay									
16										
17	Straw									
18	TOTAL STORED CROPS									
	GROWING CROPS & Livestock									
19										
20										
21	TOTAL GROWING CROPS									
	CROP SUPPLIES									
22	Seeds									
23										
24	Fertilizer, Lime Applied									
25	Fertilizer Stored									
26										
27	Herbicides									
28										
29	Insecticides									
30	Fungicides									
31	Twine, Etc.									
32	Fuel									
33										
34	Oil									
35	Grease									
36	TOTAL CROP SUPPLIES									
	LIVESTOCK SUPPLIES									
37	Veterinary Supplies									
38										
39	Bedding									
40	Other Supplies									
41										
42										
43	TOTAL LIVESTOCK SUPPL.									
44	FORM TOTAL									

ASSIGNMENT SHEET #1

Form 19 REAL ESTATE INVESTMENT AND DEPRECIATION RECORD
Tract No. _____ Date Acquired _____

Legal Description _____

_____

_____

Other Description _____

Original Basis Allocated to Land:

Purchase price, carry over basis, other _____

Settlement fees _____

Debt assumed _____

Other _____

Total Original Basis _____

less portion of basis allocated to buildings and improvements (-) _____

less reductions in basis (-) _____

Original Basis Allocated to Land _____

FORM 19 REAL ESTATE INVESTMENT AND DEPRECIATION RECORD

Tract No. _____ Date Acquired _____

Legal Description _____

_____

_____

Other Description _____

Original Basis Allocated to Land:

Purchase price, carry over basis, other _____

Settlement fees _____

Debt assumed _____

Other _____

Total Original Basis _____

less portion of basis allocated to buildings and improvements (-) _____

less reductions in basis (-) _____

Original Basis Allocated to Land _____

TRACT NO.

REAL ESTATE INVESTMENT AND DEPRECIATION RECORD

Line	Date Acquired	ITEM DESCRIPTION (kind, size, location) Buildings & Improvements	Investment Credit	Total Cost Basis	Life	Method	Annual Rate % or $	Depr. Taken in Prior Years	End 19 __ Rem. Val. at start of year	End 19 __ Depr. this Year	End 19 __ Rem. Book Value	End 19 __ Depr. this Year	End 19 __ Rem. Book Value	Est'd Current Value	Line
1															1
2															2
3															3
4															4
5															5
6															6
7															7
8															8
9															9
10															10
11		Bldg. & Depreciable Improvement		Total Depreciation											11
12		Land								.....		.....			12
13		Total													13

INVENTORY
UNIT III

ANSWER SHEET TO ASSIGNMENT SHEET #1

FORM 13 PAGE DEPRECIATION SCHEDULE: _____ MACHINERY AND EQUIPMENT

LINE	DATE ACQUIRED	ITEM DESCRIPTION KIND OF MACHINE, MAKE, MODEL, SIZE	ID NO.	NEW OR USED	INVEST. CREDIT	COST INFORMATION: REM'NG BOOK VALUE OF TRADE-IN	COST INFORMATION: CASH DIFF. PAID	COST INFORMATION: TOTAL COST BASIS	ADDITI. FIRST YEAR DEPREC.	SALVAGE VALUE	DEPRECIATION INFORMATION: BALANCE FOR REGULAR DEPREC.	DEPRECIATION INFORMATION: LIFE	DEPRECIATION INFORMATION: METHOD	DEPRECIATION INFORMATION: ANNUAL DEPREC % or $	DEPRECIATION INFORMATION: DEPREC. TAKEN IN PRIOR YEARS	LINE
1	1-1-72	Tractor 80 h.p.														1
2	1-1-72	Plow 4 Bottom														2
3	1-1-73	Springtooth Harrow														3
4	7-1-75	Offset Disk														4
5	4-1-74	Drill														5
6	9-1-74	Truck ¾ Ton														6
7	1-1-75	Stock Trailer														7

FORM 14 PAGE DEPRECIATION SCHEDULE: _____ MACHINERY AND EQUIPMENT (CON'T.)

LINE	REM'NG BK. VAL. AT START OF YEAR	END 19__: DEPREC THIS YEAR	END 19__: REM'NG BOOK VALUE	END 19__: DEPREC THIS YEAR	END 19__: REM'NG BOOK VALUE	END 19__: DEPREC THIS YEAR	END 19__: REM'NG BOOK VALUE	END 19__: DEPREC. THIS YEAR	END 19__: REM'NG BOOK VALUE	ESTIMATED CURRENT CASH VALUE: START 19 77	END 19__	END 19__	END 19__	END 19__	LINE
1										12,000					1
2										1,500					2
3										2,500					3
4										3,250					4
5										1,500					5
6										2,000					6
7										2,500					7

FORM 15 PAGE DEPRECIATION SCHEDULE: _____ LIVESTOCK FOR BREEDING

LINE	Date Acq.	I.D. or Lot No.	Item Description	Head in Lot when Acq.	Investment Credit	New or Used	PER HEAD DATA: Cost Basis	Salvg. Value	Bal. for Depr.	Life	Method	Annual Depr. % or $	START OF 19__: Per Head: Depr. in Prior Years	Per Head: Rem. Book Value	Head: Head	Head: On	Per Lot: Depr. in Prior Years	Per Lot: Rem. Book Value	END 19__: Per Head: Depr. This Year	Per Head: Rem. Book Value	Head: Sold or Died	Head: On	Per Lot: Depr. This Year	Per Lot: Rem. Book Value	LINE
1	4-1-73	1	2 yr. old Heifers	10																					1
2	9-1-73	2	3 yr. old Bull	1																					2
3	1-1-75	3	2 yr. old Heifers	8																					3
4	1-1-77	4	2 yr. old Heifers	7																					4

INVENTORY OF FEED, STORED & GROWING CROPS AND CROP & LIVESTOCK SUPPLIES

FORM 18

LINE		START 19__			END 19__			END 19__		
		QUANT.	PRICE PER UNIT	TOTAL VALUE	QUANT.	PRICE PER UNIT	TOTAL VALUE	QUANT.	PRICE PER UNIT	TOTAL VALUE
	PURCHASED FEEDS									
1	Prepared Feeds	5 tons	125	$625						
2										
3	Protein Supplements									
4										
5	Vitamins, Minerals									
6										
7	TOTAL PURCHASED FEEDS			$625						
	STORED CROPS									
8	Corn									
9	Wheat	3000 bu.	2.40	$7200						
10	Grain Sorghum									
11	Soybeans									
12	Cotton									
13	Silage									
14										
15	Hay, Prairie	10 tons	45	$450						
16										
17	Straw									
18	TOTAL STORED CROPS			$7650						
	GROWING CROPS $ invested									
19										
20										
21	TOTAL GROWING CROPS									
	CROP SUPPLIES									
22	Seeds									
23										
24	Fertilizer, Lime Applied									
25	Fertilizer Stored									
26										
27	Herbicides									
28										
29	Insecticides									
30	Fungicides									
31	Twine, Etc.									
32	Fuel									
33										
34	Oil									
35	Grease									
36	TOTAL CROP SUPPLIES									
	LIVESTOCK SUPPLIES									
37	Veterinary Supplies									
38										
39	Bedding									
40	Other Supplies									
41										
42										
43	TOTAL LIVESTOCK SUPPL.									
44	FORM TOTAL			$8275						

FORM 16 PAGE **DEPRECIATION SCHEDULE:..... LIVESTOCK FOR BREEDING (con't)**

LINE	END 19..						END 19..						END 19..						ESTIMATED CURRENT CASH VALUE					LINE
	PER HEAD		HEAD		PER LOT		PER HEAD		HEAD		PER LOT		PER HEAD		HEAD		PER LOT		PER LOT					
	Depr. This Year	Rem. Book Value	Sold or Died	On Hand	Depr. This Year	Rem. Book Value	Depr. This Year	Rem. Book Value	Sold or Died	On Hand	Depr. This Year	Rem. Book Value	Depr. This Year	Rem. Book Value	Sold or Died	On Hand	Depr. This Year	Rem. Book Value	START 1977	END 19..	END 19..	END 19..	END 19..	
1																			2,500					1
2																			400					2
3																			2,000					3
4																			1,750					4

FORM 17

LINE		START 19__				END 19__				END 19__			
		NO. HEAD	TOTAL WT.	PRICE PER UNIT	TOTAL VALUE	NO. HEAD	TOTAL WT.	PRICE PER UNIT	TOTAL VALUE	NO. HEAD	TOTAL WT.	PRICE PER UNIT	TOTAL VALUE
	SWINE												
1	Purch. Breeding F. 14/15												
2	Rsd. Breeding - Sows												
3	- Gilts												
4	- Boars												
5	TOTAL BREEDING SWINE												
6	Hogs												
7	Pigs												
8	Gilts												
9	Boars												
10	TOT. NON-BREED. SWINE												
11	TOTAL SWINE												
	BEEF												
12	Purch. Breeding F. 14/15	26			6650								
13	Rsd. Breeding - Cows	5			1250								
14	- Heifers												
15	- Bulls												
16	TOTAL BREEDING BEEF	31			7900								
17	1-2 years Heifers												
18	Bulls												
19	weaned, Heifers	10	4250	.40	1700								
20	Bulls												
21	Steers	50	22500	.45	10125								
22	Sucking Calves												
23	TOTAL NON-BREED. BEEF	60											
24	TOTAL BEEF	91			19725								
	DAIRY												
25	Purch. Breeding F. 14/15												
26	Rsd. Breeding - Cows												
27	Bred Heifers												
28	Open Heifers												
29	Bulls												
30	TOTAL BREEDING DAIRY												
31	Heifers												
32	Bulls												
33	Steers												
34	Calves												
35	TOT. NON-BREED. DAIRY												
36	TOTAL DAIRY												
	OTHER												
37													
38													
39	TOT. BREEDING												
40													
41													
42	TOT. NON-BREEDING												
43	TOTAL												
44	FORM TOTAL				19725								
45	TOTAL RAISED BREEDING												

Form 19 REAL ESTATE INVESTMENT AND DEPRECIATION RECORD
Tract No. 1 Date Acquired 1-1-69

Legal Description _____

Other Description 160 Acres

Original Basis Allocated to Land:

Purchase price, carry over basis, other	$400/A	64,000
Settlement fees		
Debt assumed		64,000
Other		
Total Original Basis		64,000
less portion of basis allocated to buildings and improvements	(-)	
less reductions in basis	(-)	
Original Basis Allocated to Land		$64,000

FORM 19 REAL ESTATE INVESTMENT AND DEPRECIATION RECORD

Tract No. 2 Date Acquired _____

Legal Description 320 Acres

Other Description _____

Original Basis Allocated to Land: $200/A

Purchase price, carry over basis, other		64,000
Settlement fees		
Debt assumed		64,000
Other		
Total Original Basis		64,000
less portion of basis allocated to buildings and improvements	(-)	
less reductions in basis	(-)	
Original Basis Allocated to Land		$64,000

FORM 20
TRACT NO.

REAL ESTATE INVESTMENT AND DEPRECIATION RECORD

Line	Date Acquired	ITEM DESCRIPTION: Kind, size, location: Buildings & Improvements	Investment Credit	Total Cost Basis	Life	Method	Annual Rate % or $	Depr Taken in Prior Years	End 19 __ Rem. Val. at start of year	End 19 __ Depr. this Year	End 19 __ Rem. Book Value	End 19 __ Depr this Year	End 19 __ Rem. Book Value	Est'd Current Value	Line
1	1 1 69	Fences		$300	15	SL	$18.66	149.28	150.72	18.66	132.06				1
2	4 1 69	Machine Shed		7500	50	SL	140	1120	6380	140	6240				2
3	1 1 70	Fences		500	15	SL	32	224	276	32	244				3
4	7 1 70	Barn		9000	50	SL	165	1155	7845	165	7680				4
5	9 1 70	Corrals		1500	10	SL	145	1015	485	145	340				5
6															6
7															7
8															8
9															9
10															10
11		Bldg. & Depreciable Improvement			Total Depreciation										11
12		Land								*****		*****			12
13		Total													13

DEPRECIATION
UNIT IV

UNIT OBJECTIVE

After completion of this unit, the cooperator should be able to discuss terms associated with keeping depreciation records, reasons for keeping these records, and be able to compute depreciation. This knowledge will be evidenced through demonstration and by completing a depreciation schedule for the home farm.

SPECIFIC OBJECTIVES

After completion of this unit, the cooperator should be able to:

1. Match terms associated with depreciation to the correct definitions.
2. Name purposes for depreciating an asset.
3. List major causes of depreciation.
4. Discuss property subject to depreciation.
5. Name various methods of computing depreciation.
6. Explain allowances made in computing depreciation.
7. Compare methods of computing depreciation.
8. Identify components of the *Oklahoma Young Farmer Association Record Book* pertaining to depreciation.
9. Complete a depreciation schedule.

DEPRECIATION
UNIT IV

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

A. Provide each cooperator with objective, information, and assignment sheets.

B. Make transparencies.

C. Discuss unit and specific objectives.

D. Discuss information and assignment sheets.

E. Explain terms given on information sheets to cooperators.

II. Instructional materials:

A. Objective sheet

B. Information sheets

C. Transparency Master 1--Comparison of Depreciation Methods

D. Assignment Sheet #1--Complete a Depreciation Schedule

E. Answers to assignment sheet

III. Unit references:

A. *Federal Tax Guide*. Chicago, Illinois: Commerce Clearing House, Inc., 1979.

B. Williams, Joseph E., *Economics of Depreciation*. Department of Agricultural Economics, A.E. Paper 7703. Stillwater: Oklahoma State University, March 1977.

C. Casey, James E. *Methods of Depreciation*. Unpublished duplicated material. Stillwater: Oklahoma State University, N.D.

D. Osburn, Donald D., and Schneeberger, Kenneth C. *Modern Agricultural Management*. Englewood Cliffs, New Jersey: Prentice-Hall, 1978.

E. Wheeler, Jon D. *Tax Desk Book for Farming and Ranching*. Englewood Cliffs, New Jersey: Institute for Business Planning Inc., 1978.

F. *U.S. Master Tax Guide*. Chicago, Illinois: Commerce Clearing House, Inc., 1977.

G. James, Sydney C., and Stoneberg, Everett. *Farm Accounting and Business Analysis*. Ames, Iowa: Iowa State University Press, 1976.

H. *Oklahoma Young Farmer Association Record Book*.

DEPRECIATION
UNIT IV

INFORMATION SHEET

I. Terms and definitions

A. Depreciation--Systematic method for arriving at the value of a working asset based on its cost; a method of prorating the cost of a working asset over its productive life

B. Working asset--Asset which gives productive service to the business over a period longer than one year and becomes less valuable over time

C. Useful life--Period over which the asset is expected to be useful to the cooperator in the business or in the production of the income

Example: An animal's useful life is usually considered to begin when it is capable of fulfilling the function for which it was intended

D. Salvage value--The amount determined at the time of acquisition, which it is estimated will be realizable upon the sale or other disposition of an asset when it is no longer useful in the cooperators trade or business or in the production of income

E. Basis--Purchase price for assets bought outright. When a like item is traded in, basis is computed as cash difference paid plus the undepreciated value of the asset traded

F. Stock in trade--Assets used in the production process

Examples: Machinery and equipment with a useful life of more than one year, breeding livestock, seed, feed, fertilizer

II. Purposes for depreciating an asset

A. Estimates annual non-cash expense

B. Adjusts taxable income

C. Estimates current value

III. Major causes of depreciation

A. Wear and tear due to use over time

B. Obsolescence due to new technology

C. Deterioration due to elements of nature

INFORMATION SHEET

IV. Property subject to depreciation

A. Law permits a deduction of a reasonable allowance for the exhaustion, wear and tear of property used in a trade or business, or of property held for the production of income. Property used for personal use, such as a personal automobile, is not deductible as a business expense

B. Depreciable farm property includes all assets used in the business of farming and having a determined useful life of more than one year. Buildings on a farm or ranch are not depreciable if they are not used in the farming business, or if not used, were not purchased with the intention of using them in the farming business. The cost of land may not be amoritized because land has no determinable useful life. Livestock acquired for work, breeding, or dairy purposes is depreciable, and then only if not inventoried

V. Methods of computing depreciation

A. Straight-line--A depreciation method where the salvage value is subtracted from the cost (basis) and the difference is divided by the useful life. The result is annual depreciation for the life of the asset

BASIS - SALVAGE VALUE/LIFE OF ASSET = ANNUAL DEPRECIATION

Example: A truck was purchased on January 1, 1975, for $5,500; it has an estimated useful life of 10 years; salvage value is estimated at $500. Calculate the annual depreciation

$$\frac{\$5,500 - \$500}{10} = \$500 \text{ Annual Depreciation}$$

YEAR	ANNUAL DEPRECIATION	ACCUMULATED DEPRECIATION	DEPRECIABLE BALANCE
1	500	500	5000
2	500	1000	4500
3	500	1500	4000
4	500	2000	3500
5	500	2500	3000
6	500	3000	2500
7	500	3500	2000
8	500	4000	1500
9	500	4500	1000
10	500	5000	500

INFORMATION SHEET

This procedure is used for 10 years with the depreciable balance at the end of 10 years equal to the salvage value ($500). If the truck were purchased at midyear, the first years depreciation would be 6/12 x $500, or $250. Each year thereafter the depreciation would be $500 until the last part of the final year when it would be $250 ($500 - $250)

B. Declining-balance--Depreciation method that is a fast write-off method which yields greater depreciation the first year and decreases over time. Annual depreciation is equal to a constant percentage multiplied by the depreciable balance. The constant percentage is determined by dividing the useful life into 100% to arrive at a constant percent per year

$$\frac{100\%}{\text{USEFUL LIFE}} = \text{STRAIGHT-LINE RATE}$$

The resulting percent is called the *straight-line* rate since it is an equal percent for each of the years of useful life. Straight-line rate is doubled to arrive at the constant percentage to use in the declining-balance method. Salvage value is not used in the computation of depreciation, under this method, however, the asset cannot be depreciated below a reasonable salvage value

Example: A truck was purchased on January 1, 1975 for $5,500; it has an estimated useful life of 10 years; salvage value is estimated at $500. Calculate annual depreciation

$$\frac{100\%}{10 \text{ YEARS}} = 10\% \text{ PER YEAR}$$

$$2 \times 10\% = 20\%$$

20% x $5,500 = $1,100
First-year depreciation

20% x $4,400 = $880
Second-year depreciation

YEAR	YEARLY DEPRECIATION	ACCUMULATED DEPRECIATION	DEPRECIABLE BALANCE
1	1100	1100	4400
2	880	1980	3520
3	704	2684	2816
4	563.20	3247.20	2252.80
5	450.56	3697.76	1802.24
6	360.45	4058.31	1441.79
7	288.36	4346.57	1153.43
8	230.68	4577.25	922.74
9	184.55	4761.79	738.19
10	147.64	4909.44	590.55

INFORMATION SHEET

If an item was purchased at mid-year instead of the beginning of the year, the computations would be:

20% x $5,500 x 6/12 = $550 first year depreciation

$5,500 - $550 = $4,950 depreciable balance

20% x $4,950 = $990 second year depreciation

$4,950 - $990 = $3,960 depreciable balance

(NOTE: The Internal Revenue Service has placed several restrictions on the declining-balance method of depreciation. The asset must have a useful life of at least 3 years, and a maximum of twice (200%) the straight-line rate may be applied for new tangible property; for new or used tangible property, the cooperator may use one and one half (150%) the rate of the straight-line method of depreciation.)

C. Sum-of-the-years digits--Depreciation method that completely depreciates the basis (minus salvage value) of an asset over the period of its useful life. This method allows greater depreciation charges in earlier years, but not as great as the declining-balance method. The formula for calculating depreciation is:

$$\text{COST - SALVAGE VALUE} \times \left[\frac{\text{(CURRENT YEAR)}}{\text{SUM-OF-THE-YEARS DIGITS}}\right]$$

1. The numerator of the fraction is the years of life remaining at the beginning of the account period

   Example: Asset having 10 year life

YEAR OF USE	1	2	3	4	5	6	7	8	9	10
LIFE REMAINING (NUMERATOR)	10	9	8	7	6	5	4	3	2	1

2. The denominator of the fraction is the sum-of-the-years of life of the asset

   Example: Asset having 10 year life

$$\frac{N^2 + N}{2} = \text{SUM-OF-THE-YEARS DIGITS}$$

$$\frac{(10^2 + 10)}{2} = 55$$

INFORMATION SHEET

Example: A truck has an estimated useful life of 10 years. Salvage value is estimated at $500. Calculate annual depreciation

$$\frac{10}{55} = .1818$$

.1818 x (5,500 - 500) = 909.09 first years depreciation

$$\frac{9}{55} = .16$$

.16 x (5,500 - 500) = 818.18 second years depreciation

YEAR	ANNUAL DEPRECIATION	ACCUMULATED DEPRECIATION
1	909.09	909.09
2	818.18	1727.27
3	727.27	2454.54
4	636.36	3090.90
5	545.45	3636.35
6	454.54	4090.90
7	363.63	4454.54
8	272.72	4727.54
9	181.81	4909.08
10	90.90	5000

The same Internal Revenue Service restrictions apply to the sum-of-the-years digits method as to the declining-balance method

D. Other consistent methods--While the straight-line, declining-balance and sum-of-the-year digits are most commonly used, the Internal Revenue Service allows the use of any other consistent method if the total deductions during the first two-thirds of the useful life are not more than the total allowable under the declining-balance method. Some of these methods are:

1. Combination--Depreciation method that is simply a combination of an accelerated depreciation method and the straight-line method. Most of these combination methods require the consent of the Internal Revenue Service. However, a change from the declining-balance method to the straight-line method may be made at any time and does not require the consent of the Internal Revenue Service

2. Productive-life--Depreciation method used by some businesses on assets where the annual use can be tabulated. The total depreciable amount is then prorated over the total units of useful life on the basis of the amount used each year

(NOTE: Other methods are also available. Any method that will give a reasonable depreciation allowance within legal limits is acceptable.)

VI. Allowances made in computing depreciation

A. Additional first-year depreciation--Any cooperator may elect to write off 20 percent of the cost of an asset for the first taxable year for which a depreciation deduction is allowable in addition to the regular depreciation of the balance. This additional depreciation is computed on the cost of the asset without a deduction for salvage value. The additional 20 percent allowance applies to tangible personal property to the extent of $10,000 of cost ($20,000 on a joint return), with a remaining useful life of at least six years

Example: If a cooperator purchases a machine for $30,000, 20% of the first $10,000 may be taken for a cooperator filing separately, or 20% of the first $20,000 may be taken for a cooperator filing a joint return. This makes the maximum allowable $2,000 for a cooperator filing separately or $4,000 for a cooperator filing a joint return

B. Salvage value--Internal Revenue Service regulations state that an asset may not be depreciated below a reasonable salvage value under any method of computing depreciation for any reason. However, refering to depreciable personal property (other than livestock) with a useful life of three years or more, acquired after October 16, 1962, a taxpayer may reduce the salvage value taken into account by up to 10 percent of the basis of the property

C. Proration of depreciation allowance--If a depreciable asset is acquired during the year, only part of a full year's depreciation is allowed. To compute the partial deduction, multiply the first full year's depreciation allowance by the months the property was owned and divide by 12. For example, if it was owned for six months during the year, the deduction would be 6/12 or 1/2 of a full years depreciation. A property is usually considered owned for the month of purchase if it is acquired during the first 15 days of the month. If acquired after the 15th, the month would not be counted. Consistently, the disposition month would be counted only if the disposition occurred after the 15th. The proration could be made according to the number of days held.

INFORMATION SHEET

Sum-of-the-years-digits method requires a special proration procedure where a partial year's depreciation is allowable in the first year. If an asset is held for three months in the first year, 3/12 of the first full year's depreciation is allowable in that year. Depreciation in the second year is the sum of 9/12 of the first full year's depreciation and 3/12 of the second full year's depreciation. This procedure is continued throughout the entire useful life of the asset

VII. Comparing methods of computing depreciation (Transparency 1)

A. Each of the three most common methods of computing depreciation yields a different amount in each year in the useful life of the asset. In the first year, the declining-balance gives the greatest depreciation, followed by the sum-of-the-years digits method and the straight-line method. However, in the last year, the straight-line method gives the greatest depreciation, followed by the declining balance and sum-of-the-years digits method

B. Income tax and other considerations are relevant in selecting a depreciation method. Remember, however, that the method selected may not affect the total farm depreciation. Only 100 percent of the depreciable value of an asset may be charged. If the amount of depreciation is greater in early years, it is less in later years. Farmers tend to group their purchases of new properties according to fat and lean years in the business and the selection of a method becomes important as an income leveler and tax adjuster. Any increase in deductible business expenses, such as depreciation, result in reduced tax liability. Annual tax reduction due to depreciation is a function of depreciation expense and marginal tax rate. The higher the marginal tax rate, the greater the total tax reduction due to depreciation. Therefore, faster write-off methods (declining-balance, sum-of-the-years digits method, and 20% additional first year allowance) can be used in periods of high income to reduce the tax liability and stabilize income levels

C. Many farmers use the straight-line method of depreciation because of its simplicity. Other methods require an annual calculation of allowable depreciation. Farmers often feel it is too difficult and time consuming to use the declining balance or sum-of-the-years digits method. From a tax management standpoint, a farmer should utilize the method that gives the greatest potential advantage

D. Another consideration in selecting a method of depreciation is the cost of using a depreciable asset in the business. If the services provided by the asset do not decline with age and a fast write-off method is selected, this gives a distorted business expense as related to the productivity or service rendered. One other aspect of this relates to repair. The repair costs usually increase with the age of the property. If the straight-line method is used, a larger business cost (depreciation plus repair) would come in later years of life when the service rendered may be less. The service and repair functions should be considered when selecting a depreciation method

INFORMATION SHEET

E. Guidelines for selecting depreciation methods--Keeping in mind the purpose of establishing a realistic market value as well as a business expense, the following guidelines might be useful in deciding which method to apply

1. Power machinery (trucks, tractors, combines, silo unloaders, and any others) normally change in value faster in early years than in later years of their life, so the declining balance method usually works best for these items

2. Nonpowered machinery (plows, planters, wagons, and others) normally change in value about equally throughout their life, so the straight-line method usually fits these items best

3. Farm buildings do not have an established market value, so the depreciation method selected should be related to the services provided. Usually the straight-line method approximates these

4. New untried machines do not have an established length of service life. For these it may be wise to select a faster write-off method, either the declining balance, or sum-of-the-years digits method

5. Small tools and equipment (hammers, wrenches, shovels, feed pans, buckets, and others) whose purchase price is relatively small and whose service life is undetermined should be included in inventory but probably not depreciated. Normally these items are written off as an expense in the year purchases

VIII. Components of the *Oklahoma Young Farmer Association Record Book* pertaining to depreciation

A. Form 13, Machinery and Equipment Depreciation Schedule--Used to record information on machinery and equipment depreciation schedules. Space is provided for a description of the item, investment credit (if any), cost information, additional first year depreciation computed on cash difference without a reduction for salvage value, balance of regular depreciation (remaining cost after reduction for additional first year depreciation and salvage value), estimated life of the asset, method of depreciation, annual depreciation, and depreciation taken in prior years

FORM 13 PAGE DEPRECIATION SCHEDULE: _____ MACHINERY AND EQUIPMENT

LINE	DATE ACQUIRED	ITEM DESCRIPTION KIND OF MACHINE, MAKE, MODEL, SIZE	ID NO.	NEW OR USED	INVEST. CREDIT	COST INFORMATION			ADDITI. FIRST YEAR DEPREC.	SALVAGE VALUE	DEPRECIATION INFORMATION					LINE
						REM'NG BOOK VALUE OF TRADE-IN	CASH DIFF. PAID	TOTAL COST BASIS			BALANCE FOR REGULAR DEPREC.	LIFE	METHOD	ANNUAL DEPREC % or $	DEPREC. TAKEN IN PRIOR YEARS	
1																1
2																2

INFORMATION SHEET

B. Form 14, Machinery and Equipment Depreciation Schedule--Continuation of Form 13. Space is provided to record the remaining book value at the start of the year, the depreciation taken each year, and the remaining book value for each of the next four years. The remainder of Form 14 is to record inventory information

FORM 14 PAGE DEPRECIATION SCHEDULE:_____ MACHINERY AND EQUIPMENT (CON'T.)

LINE		END 19_ _		END 19_ _		END 19_ _		END 19_ _		ESTIMATED CURRENT CASH VALUE					LINE
	REM'NG BK. VAL. AT START OF YEAR	DEPREC THIS YEAR	REM'NG BOOK VALUE	DEPREC. THIS YEAR	REM'NG BOOK VALUE	DEPREC. THIS YEAR	REM'NG BOOK VALUE	DEPREC. THIS YEAR	REM'NG BOOK VALUE	START 19_ _	END 19_ _	END 19_ _	END 19_ _	END 19_ _	
1															1
2															2

C. Form 15, Depreciation Schedule Livestock for Breeding--Depreciation schedule for purchased livestock held for breeding; contains general information on livestock, per head data on cost and depreciation, depreciation in prior years. Also, included is the remaining book value on a per head and on a per lot basis. All information is recorded on a per head or per lot basis

FORM 15 PAGE DEPRECIATION SCHEDULE:_____ LIVESTOCK FOR BREEDING

LINE	Date Acq.	I.D. or Lot No.	Item Description	Head in Lot when Acq.	Investment Credit	New or Used	PER HEAD DATA						START OF 19_ _					END 19_ _						LINE
							Cost Basis	Salvg. Value	Bal. for Depr.	Life	Method	Annual Depr. % or $	Per Head		Head	Per Lot		Per Head		Head		Per Lot		
													Depr. in Prior Years	Rem. Book Value	On Hand	Depr. in Prior Years	Rem. Book Value	Depr. This Year	Rem. Book Value	Sold or Died	On Hand	Depr. This Year	Rem. Book Value	
1																								1
2																								2

D. Form 16, Depreciation Schedule Livestock for Breeding--Continuation of Form 15. Space is provided to record per head and per lot depreciation, and remaining book value data for three additional accounting periods. The remainder of Form 16 is for inventory information

FORM 16 PAGE DEPRECIATION SCHEDULE:_____ LIVESTOCK FOR BREEDING (con't)

LINE	END 19..						END 19..						END 19..						ESTIMATED CURRENT CASH VALUE					LINE
	PER HEAD		HEAD		PER LOT		PER HEAD		HEAD		PER LOT		PER HEAD		HEAD		PER LOT		PER LOT					
	Depr. This Year	Rem. Book Value	Sold or Died	On Hand	Depr. This Year	Rem. Book Value	Depr. This Year	Rem. Book Value	Sold or Died	On Hand	Depr. This Year	Rem. Book Value	Depr. This Year	Rem. Book Value	Sold or Died	On Hand	Depr. This Year	Rem. Book Value	START 19..	END 19..	END 19..	END 19..	END 19..	
1																								1
2																								2

INFORMATION SHEET

E. Form 19, Real Estate Investment and Depreciation Record--Record of real estate transactions. Space is provided for recording tract number, date acquired, legal description, and original basis

Form 19 REAL ESTATE INVESTMENT AND DEPRECIATION RECORD
Tract No. _____ Date Acquired _____

Legal Description _____

_____

_____

Other Description _____

Original Basis Allocated to Land:

Purchase price, carry over basis, other _____

Settlement fees _____

Debt assumed _____

Other _____

Total Original Basis _____

less portion of basis allocated to buildings and improvements (-) _____

less reductions in basis (-) _____

Original Basis Allocated to Land _____

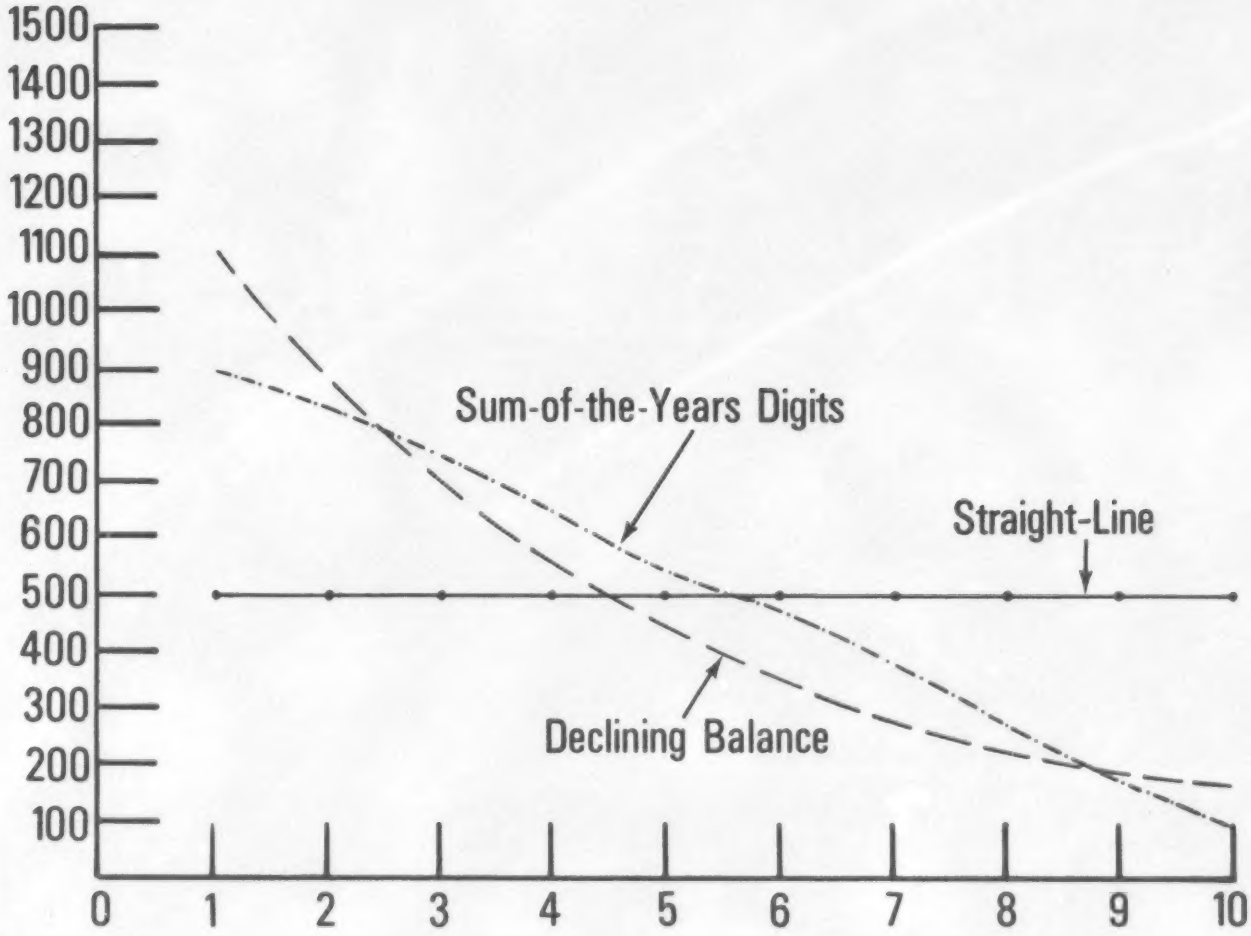
F. Form 20, Real Estate Investment and Depreciation Record--Record of buildings, and improvements owned by the cooperator. Space is provided to record investment credit, depreciation information, and remaining portion is used for recording the remaining book value at the start of this year, depreciation taken, and the remaining book value at the end of this year and at the end of the following three years

FORM 20
TRACT NO. _____

REAL ESTATE INVESTMENT AND DEPRECIATION RECORD

Line	Date Acquired	ITEM DESCRIPTION (kind, size, location) Buildings & Improvements	Investment Credit	Total Cost Basis	Life	Method	Annual Rate % or $	Depr. Taken in Prior Years	End 19 __			End 19 __		Est'd Current Value	Line
									Rem. Val. at start of year	Depr. this Year	Rem. Book Value	Depr. this Year	Rem. Book Value		
1															1
2															2
3															3
4															4
5															5
6															6
7															7
8															8
9															9
10															10
11		Bldg. & Depreciable Improvement			Total Depreciation										11
12		Land								*****		*****			12
13		Total													13

Comparison of Depreciation Methods



DEPRECIATION
UNIT IV

ASSIGNMENT SHEET #1--COMPLETE A DEPRECIATION SCHEDULE

A farm cooperator has the following items in the cooperator's depreciation schedules. Compute the remaining book value at the start of 1978, the depreciation taken this year, and the remaining book value at the end of 1978 for all assets in the cooperator's depreciation schedule.

FORM 13 PAGE DEPRECIATION SCHEDULE: _____ MACHINERY AND EQUIPMENT

LINE	DATE ACQUIRED	ITEM DESCRIPTION KIND OF MACHINE, MAKE, MODEL, SIZE	ID NO.	NEW OR USED	INVEST. CREDIT	COST INFORMATION: REM'NG BOOK VALUE OF TRADE-IN	COST INFORMATION: CASH. DIFF. PAID	COST INFORMATION: TOTAL COST BASIS	ADDITI. FIRST YEAR DEPREC.	SALVAGE VALUE	DEPRECIATION INFORMATION: BALANCE FOR REGULAR DEPREC.	LIFE	METHOD	ANNUAL DEPREC % or $	DEPREC. TAKEN IN PRIOR YEARS	LINE
1	1/75	Tractor		N			12000	12000	2400	1200	9600	8	DB	25%	5550	1
2	1/75	Plow		N			1500	1500	300	150	1200	8	SL	150	450	2
3	9/77	Truck 3/4 Ton		N		1000	4000	5000			5000	4	SYD	4/10	667	3
4	7/76	Offset Disk		N		400	3100	3500	700		2800	10	SL	280	420	4
5	1/77	Chevy Sedan (50%)		N		300	2700	3000		600	3000	3	DB	66.67%	2000	5

FORM 15 PAGE DEPRECIATION SCHEDULE: _____ LIVESTOCK FOR BREEDING

LINE	Date Acq.	I.D. or Lot No.	Item Description	Head in Lot when Acq.	Investment Credit	New or Used	PER HEAD DATA: Cost Basis	Salvg. Value	Bal. for Depr.	Life	Method	Annual Depr. %or $
1	3/76		Heifers	10			300	150	150	5	SL	30
2	9/76		Bull	1			550	250	300	5	SL	60
3	5/78		Heifers	8			330	150	180	5	SL	36

FORM 20 TRACT NO. _____ REAL ESTATE INVESTMENT AND DEPRECIATION RECORD

Line	Date Acquired	ITEM DESCRIPTION (kind, size, location) Buildings & Improvements	Investment Credit	Total Cost Basis	Life	Method
1	1/76	Machinery Shed		8500	25	SL
2	7/77	Fences		1200	10	DB

DEPRECIATION
UNIT IV

ANSWERS TO ASSIGNMENT SHEET #1

FORM 14 PAGE DEPRECIATION SCHEDULE: _____ MACHINERY AND EQUIPMENT (CON'T.)

LINE		END 1978		END 19__		END 19__		END 19__		ESTIMATED CURRENT CASH VALUE					LINE
	REM'NG BK. VAL. AT START OF YEAR	DEPREC THIS YEAR	REM'NG BOOK VALUE	DEPREC. THIS YEAR	REM'NG BOOK VALUE	DEPREC. THIS YEAR	REM'NG BOOK VALUE	DEPREC. THIS YEAR	REM'NG BOOK VALUE	START 19__	END 19__	END 19__	END 19__	END 19__	
1	4050	1012	3038												1
2	750	150	600												2
3	4333	1833	2500												3
4	2380	280	2100												4
5	1000	400	600												5

FORM 15

START OF 1978					END 1978						LINE
Per Head		Head	Per Lot		Per Head		Head		Per Lot		
Depr. in Prior Years	Rem. Book Value	On Hand	Depr. in Prior Years	Rem. Book Value	Depr. This Year	Rem. Book Value	Sold or Died	On Hand	Depr. This Year	Rem. Book Value	
55	245	10	550	2450	30	215	0	10	30	2150	1
80	470	1	80	470	60	410	0	1	60	410	2
					24	306	0	8	192	2448	3

FORM 20

Annual Rate % or $	Depr. Taken in Prior Years	End 1978			End 19___		Est'd Current Value	Line
		Rem. Val. at start of year	Depr. this Year	Rem. Book Value	Depr. this Year	Rem. Book Value		
340	680	7820	340	7480				1
15%	90	1100	167	943				2

ENTERPRISE ACCOUNTING
UNIT V

UNIT OBJECTIVE

After completion of this unit, the cooperator should be able to discuss terms associated with enterprise accounting and reasons for keeping these records. The cooperator should be able to select enterprise financial accounts and identify types of physical records. This knowledge will be evidenced through demonstration and by setting up enterprise accounts and physical records for the home farm.

SPECIFIC OBJECTIVES

After completion of this unit, the cooperator should be able to:

1. Match terms associated with enterprise accounting to their correct definitions.
2. List purposes of enterprise accounts.
3. Discuss uses of enterprise financial accounts.
4. Discuss allocation of overhead costs.
5. Discuss purposes of keeping physical records.
6. Identify types of production records.
7. Identify types of mortality and breeding records.
8. Identify types of livestock production records.
9. Name uses of labor records.
10. Identify physical records allocating costs among various enterprises.
11. Discuss use of home products record.
12. Post physical records in the *Oklahoma Young Farmer Association Record Book.*

ENTERPRISE ACCOUNTING
UNIT V

SUGGESTED ACTIVITIES

I. Suggested activities for the instructor:

A. Provide cooperator with objective sheet.

B. Provide cooperator with information and assignment sheets.

C. Make transparencies.

D. Discuss unit and specific objectives.

E. Discuss information and assignment sheets.

II. Instructional materials:

A. Objective sheet

B. Information sheet

C. Assignment Sheet #1--Post Physical Records in the *Oklahoma Young Farmer Association Record Book*

D. Answers to assignment sheet

III. Unit references:

A. James, Sydney C., and Stoneberg, Everett. *Farm Accounting and Business Analysis.* Ames, Iowa: Iowa State University Press, 1976.

B. Hopkins, John A., and Heady, Earl O. *Farm Records and Accounting.* Ames, Iowa: Iowa State University Press, 1967.

C. James, Sydney C., and Trede, Larry. *Midwest Farm Account Book.* Ames, Iowa: Department of Economics, Iowa State University of Science and Technology, 1970.

D. *Summary and Analysis of Farm Business Records.* Ohio Agricultural Education Curriculum Materials Service, 1976.

E. *Oklahoma Young Farmer Association Record Book.*

ENTERPRISE ACCOUNTING
UNIT V

INFORMATION SHEET

I. Terms and definitions

A. Enterprise financial accounting--Detailed recording of all income and expense items directly related to a specific enterprise

B. Ownership and overhead--Costs that are not distinctly related to a single enterprise or portion of an enterprise. Ordinarily, they occur regardless of the quantity of production within a specified time period

Examples: Taxes on real estate, mortgage interest, depreciation and upkeep on improvements or machinery, labor of the operator or the family, general farm utility bills

II. Purposes of enterprise accounts

A. Pinpoints the level of profitability and the factors affecting this profitability during the enterprise accounting period

Example: Records may show that feeding wheat may be more profitable than selling wheat

B. Aids cooperator in making decisions relative to the future because records kept over a period of time reveal the level of performance from year-to-year

Example: Dairy production records and feed records may supply information on input-output relationships that may be expected in the future

C. May indicate through comparison over a specific time period how successful management performance is in maintaining or improving profitability of the individual enterprise

Example: Implementation of new technology is a management decision. Changing from clean farming to stubble mulch is a change in technology. If such a change is made, complete records will supply the necessary data to evaluate the profitability of that decision

III. Uses of enterprise financial accounts

A. Crops--Information on direct expenses, such as purchase of seed, fertilizer, and direct payments for harvesting, will be available in financial records. Also included are the receipts from direct sales of crops and the inventory at the end of the year. Crop enterprise accounts may be kept in many ways

Examples: By crop, field, crop variety

INFORMATION SHEET

B. Livestock--Information on direct expenses, sales, and inventory are available in the financi ! records. Livestock enterprise accounts, like crops, may be kept in several ways

Examples: General accounts for beef cattle, swine, dairy cattle

C. Ownership and overhead--Expenses, such as taxes on real estate, machinery, mortgage interest, and utility bills that cannot be directly attributed to an enterprise, may be allocated at the time incurred or placed in an overhead account. At the end of the accounting period, these expenses in the overhead account will have to be allocated among enterprises for analysis purposes

D. Business transactions--Contained in the *Oklahoma Young Farmer Association Record Book* are two forms to record enterprise financial information. Form 1 and Form 5 space provided for net amount received on business transactions, detailed description of the transaction, and covers crop sales, livestock sales, and other miscellaneous farm income

FORM I PAGE MONTH 19__ FARM RECEIPTS

LINE	DATE	TOTAL RECEIPTS $ ¢	DETAILED DESCRIPTION to whom, what, etc	CROP SALES AMT. tons lbs. bu.	CROP SALES KIND write in below $ ¢	$ ¢	$ ¢	$ ¢	MISC. FARM RECEIPTS Gov't Paym'ts $ ¢	Custom Work $ ¢	Pat. Div., Refunds, Resales $ ¢	Cash Rent, Other $ ¢	
			subtotals brought from preceding page										
1													1
2													2
3													3
4													4
5													5

INFORMATION SHEET

FORM 5 PAGE MONTH ENTERPRISE RECEIPTS

ITEM DESCRIPTION, QUANTITY, ETC.	AMT. $	AMT. ¢	ITEM DESCRIPTION, QUANTITY, ETC.	AMT. $	AMT. ¢	ITEM DESCRIPTION, QUANTITY, ETC.	AMT. $	AMT. ¢	LINE
subtotals brought from preceeding page									
									1
									2
									3
									4
									5
									6
									7

E. Farm expenditures--*Oklahoma Young Farmer Association Record Book*, farm expenditures is used in balancing the checkbook at the end of the month; it contains a detailed description of what was bought and from whom. Form 11 is a distribution of enterprise expenses. This form is used for enterprise accounting. Each column should correspond to enterprise recorded in Form 7

FORM 7 PAGE MONTH 19__ FARM EXPENDITURES

LINE	DATE	TOTAL COST $	TOTAL COST ¢	CHECK NO.	DETAILED DESCRIPTION WHAT WAS BOUGHT, FROM WHOM	HIRED LABOR $	HIRED LABOR ¢	REPAIRS $	REPAIRS ¢	INTEREST $	INTEREST ¢	FEED lbs	FEED $	FEED ¢	SEEDS, PLANTS $	SEEDS, PLANTS ¢	FERT. LIME, CHEM. $	FERT. LIME, CHEM. ¢	LINE
					subtotals brought from preceeding page														
1																			1
2																			2

FORM 11 PAGE MONTH ENTERPRISE EXPENDITURES

ITEM DESCRIPTION QUANTITY, ETC.	AMT. $	AMT. ¢	ITEM DESCRIPTION QUANTITY, ETC.	AMT. $	AMT. ¢	ITEM DESCRIPTION QUANTITY, ETC.	AMT. $	AMT. ¢	LINE
subtotals brought from preceeding page									
									1
									2

INFORMATION SHEET

IV. Allocation of overhead costs--In order to analyze the profitability of each enterprise, overhead should be allocated among the enterprises. No method is available which guarantees correct apportionment of overhead costs. The procedures listed below may be used as approximations.

A. Overhead costs can be divided among the various enterprises in proportion to the income contributed by each to the entire farm business. If grain, swine, and cattle make up 40, 50, and 10 percent respectively of gross income, then overhead expenses could be divided in that proportion. Major disadvantages of this method include that a drop in the price received for the output of an enterprise will raise the overhead costs allocated to the remaining enterprises

B. Overhead expenses of a building, such as a barn, may be broken down among livestock enterprises according to the total space occupied by each. If milk-cows, sheep, and beef cattle each occupied 1/3, building costs would be divided in the same proportion. Land cost can be treated similarly in allocating rent or taxes against the various crops. One disadvantage of this method is if one enterprise is dropped, costs will increase for the remaining enterprises even though these enterprises are not expanded in size

C. The cost per unit of service may be computed on a custom basis (the rate which would be paid if the service were hired)

Examples: Appropriate for planting, tilling, and harvesting crops; appropriate for family, operator, or hired labor used on livestock

(NOTE: Approximations can be made by other methods; no one method applies universally, and several may be applied to the various costs incurred in a single enterprise.)

V. Purposes of keeping physical records

(NOTE: Physical records normally include crop records, farm maps, livestock feed records, production records for each class of livestock, labor records, dairy herd improvement records, and other items of special importance to an individual farm or ranch.)

A. Records the materials and resources used by the various enterprises or the different production practices

B. Shows the yield, production, or physical performance of the enterprise

C. Supplements financial records

(NOTE: A positive return comes partly as a result of wise choices in regard to costs and prices of products, but also from efficient use of land, labor, feeds, and other materials. Complete records provide a basis for comparison of performance levels as standards over time between enterprises and between farms. Physical records are not substitutes for financial records.)

INFORMATION SHEET

VI. Types of production records

A. Production records--Crop yield information is needed for measuring crop efficiency. Yield records alone are not very meaningful unless data surrounding particular yield levels are recorded

Examples: Previous crops, varieties, fertilizer rates, pesticides, peculiar weather, and other meaningful variables

(NOTE: Such a record is included in the *Oklahoma Young Farmer Association Record Book*, the Crop Records section is designed to record several years data for each field in the same record.)

FORM S-8

CROP RECORDS

FIELD NO. _____ SOIL _____
ACRES _____ CHARACTERISTICS _____

YEAR	CROP AND VARIETY	YIELD			SEEDING RATE	FERTILIZER APPLIED	CHEMICALS APPLIED	COMMENTS
		UNIT	PER ACRE	TOTAL				

B. Crop production summary--Pulls together yields for each crop and the acres involved so that total production can be calculated. A summary of this type greatly facilitates computation of total value of crops produced, value of feed crops raised, and other data which will be helpful later in analyzing the year's operation. It is needed whether or not individual field records are kept

(NOTE: In the *Oklahoma Young Farmer Association Record Book*, there is a Crop Production Summary page; this record includes space for all common crops, columns in which to record acreage, yield, and production of each field. It is possible to see at a glance from this record what use was made of the acreage of the entire farm.)

INFORMATION SHEET

FORM S-9

CROP PRODUCTION SUMMARY

	CROP	UNIT	PRICE	OWNED LAND					RENTED LAND	
				FIELD	*ACRES	YIELD	PRODUCTION	AMOUNT	FIELD	ACRES
1	Cash Crops							$		
2										
3										
4										
5										
6										
7										
8	Small Grains									
9										
10										
11										
12										
13										
14										
15	Hay*									
16										
17										
18										
19										
20										
21										
22	Diverted acres	———	———			———	———			
23										
24										
25	Total crop acres	———	———	———		———	———	———	———	
26	Rotated pasture									
27										
28										
29	Total rotated acres	———	———	———		———	———	———	———	
30										
31	Improved permanent pasture									
32	Native unimproved pasture									
33										
34	Woodland	———	———	———		———	———		———	
35	Waste, etc	———	———	———		———	———	———	———	
36	Farmstead	———	———	———		———	———	———	———	
37	Total Farm	———	———	———		———	———	$	———	

*Report hay acres from multiple cuttings, and double crop acres only once

FORM S-10

CROP PRODUCTION SUMMARY (Continued)

	RENTED LAND (Continued)							WHOLE FARM			
	YIELD	PRODUCTION	AMOUNT	LANDLORD SHARE		OPERATOR SHARE		*ACRES	YIELD	PRODUCTION	AMOUNT
				QTY.	AMOUNT	QTY.	AMOUNT				
1			$		$		$				$
2											
3											
4											
5											
6											
7											
8											
9											
10											

INFORMATION SHEET

VII. Types of mortality and breeding records

A. Mortality records are useful in keeping track of livestock numbers but their value is enhanced if the cause of death is recorded. With information contained in this record, disease prevention plans can be developed for future use. Historical mortality figures give some idea about the percentage of death loss that can be predicted for the future

FORM S-3

MORTALITY RECORD

DATE	TYPE:			TYPE:			TYPE:			CAUSE OF DEATH
	NO.	WEIGHT	AMOUNT	NO.	WEIGHT	AMOUNT	NO.	WEIGHT	AMOUNT	

(NOTE: Mortality information may be helpful when interpreting the income statement; if the numbers are unusual, this might cause the net income to be lower or higher.)

B. Breeding records can be developed for individual animals or groups of animals. Purebred producers usually desire more detail than commercial producers

FORM S-2

BREEDING RECORD

Individual animals may be identified or a number of animals may be grouped by breeding date. The breeding date may be a specific day or extend over several weeks.
The comments column is for recording unusual information such as birth difficulties, disease, and weather.

	NAME OR NUMBER	DATE BRED	DATE REBRED	DATE DUE	SIRE	DATE BORN	NO. BORN	NO. WEANED	WEANING WEIGHT	COMMENTS
1										
2										
3										
4										
5										
6										
7										

Dates are useful for planning farm operations. Sires can be indicated if pedigrees are desired, or if they are used for rate of gain determinations. The breeding record may also serve as a birth record and weaning record. A birth record is important for recording the number of births, information relating to dam and sire, and dates useful for planning

(NOTE: Birth percentages and numbers can be calculated from this record. A weaning record can be either by numbers or weights.)

INFORMATION SHEET

VIII. Types of livestock production records

A. Livestock production summary records of growth can be kept on individual animals, lots or pens, group purchases, or whole herds. These may cover periods of specified intervals or an inventory period of one year. For any of these, calculation of a beginning and ending weight are necessary

FORM S-7

LIVESTOCK PRODUCTION SUMMARY

This table summarizes number, weight and value increases or productions for the year. The number in L11 should be zero since the TOTAL number IN (L4) should balance the TOTAL number OUT (L9). Hence, L11 will indicate accounting errors in the number of livestock.

	DESCRIPTION	TYPE: NO.	WEIGHT	AMOUNT	TYPE: NO.	WEIGHT	AMOUNT	TYPE: NO.	WEIGHT	AMOUNT
1	Opening Inventory			$			$			$
2	Purchases									
3	Births		———	———		———	———		———	———
4	TOTAL IN			$			$			$
5	Closing Inventory									
6	Sales									
7	Home Consumed Products									
8	Deaths		———				———			———
9	TOTAL OUT			$			$			$
10	INVENTORY CHANGE (6-1)			$			$			$
11	NET INCREASE (11-5)			$			$			$

TOTAL LIVESTOCK INCREASE FORMS 8&9 $

The counting of numbers produced (L3) should conform to the counting of deaths (L8). For example if the number of pigs produced refers to the number weaned then the number died would reflect only those that died after weaning. Whether the weight of animals died is recorded is optional.

	TYPE: NO.	WEIGHT	AMOUNT	TYPE: NO.	WEIGHT	AMOUNT	TYPE: NO.	WEIGHT	AMOUNT	TYPE: NO.	WEIGHT	AMOUNT
1			$			$			$			$
2												
3	———		———		———	———		———	———		———	———
4												
5			$			$			$			$
6												
7												
8			———			———			———			———
9			$			$			$			$
10			$			$			$			$
11	———		$			$			$			$

TOTAL LIVESTOCK INCREASE FORMS 8&9 $

INFORMATION SHEET

B. Livestock feed records are among the most important statistical records if livestock production efficiency is to be measured. Feed costs account for 50-80 percent of the total cost of producing meat and other livestock products. The livestock feeding record may be kept on individual animals, lots, pens, and purchases, or for the whole class. Feed may be recorded daily or at weekly intervals. Quantities can be measured by weight and volume or a combination of these

FORM S-4

LIVESTOCK FEEDING RECORD FOR _____ ENTERPRISE

These pages are for recording the total feed fed to one enterprise. Lines are provided for weekly summaries or a representative day in a week. Any method which will measure the total feed fed is acceptable

	Day, Week, or Month	No. Animals	Pasture				Roughages			Concentrates			Other
			Field	Days	Field	Days							
1													
2													
3													
4													
5	Jan. Total												

C. Crop and feed balance is used to calculate total quantities of feed fed. It combines information from the purchases and sales accounts and the feed crop production record after adjusting for inventory change

FORM S-6

CROP AND FEED BALANCE

	This table requires the accounting of the operator's share only. Hence the feed purchased, raised, sold, etc. refers to that belonging to the operator. Under livestock share arrangements it may be desirable to also show these items to include the landlord's share. UNIT OF MEASURE		CROP OR FEED							
			QTY.	AMOUNT	QTY.	AMOUNT	QTY.	AMOUNT	QTY.	AMOUNT
1	SOURCE OF FEED	Opening Inventory		$		$		$		$
2		Purchased								
3										
4		Crops Raised								
5		Total In								
6	FEED ACCOUNTED FOR	Closing Inventory								
7		Sales								
8										
9		Seeded								
10		Wastage, Spoilage								
11		Total Out								
12	TOTAL FEED FED* L5 - L11			$		$		$		$

INFORMATION SHEET

13	FEED CONSUMED BY LIVESTOCK FROM FEED RECORDS	Beef												
14														
15														
16		Swine												
17														
18														
19		Dairy												
20														
21		Non-Prod. Lvstk.												
22														
23	TOTAL FEED RECORDED**			$			$			$			$	
24	ERROR (DIFFERENCE) L12-23			$			$			$			$	
25	TOTAL FEED FED AS DETERMINED FROM ALL SOURCES***			$			$			$			$	

TOTAL WEIGHT OF ALL FEEDS FED ____ LBS.

TOTAL VALUE OF ALL FEEDS FED $ ____

*As tabulated by difference from inventories, production, purchases and sales
**As recorded from feed records
***Final feed allocation as determined from all sources
****Convert all feeds to pounds and roughages to a 90% dry weight (hay equivalent) basis

IX. Uses of labor records

(NOTE: Often it is useful to keep a record of the labor used on one or more enterprises where there is some special reason to study efficiency, seasonal requirements, where labor allocation is important in the selection of enterprises, or to determine whether a particular enterprise with a high labor requirement is profitable.)

A. Aids when there are labor problems

(NOTE: Labor becomes a particularly critical item at certain times of the year. As enterprises compete for labor use, its value (measured in terms of increasing net farm income) may be many times greater than market price. In this respect, farm labor records may be useful at intervals in the history of the farm even though they may not be kept on a continuing basis by most cooperators

B. Provides summaries, if labor records are complete, of total labor use by each enterprise, seasonal use of labor by enterprise or activity, time required to perform particular acitivites, and employees activity

(NOTE: This data is useful for farm planning at various stages. They are essential when determining the substitution of machines and equipment for labor.)

INFORMATION SHEET

C. Records on a monthly basis, the total labor supplied by the cooperator, the family, hired labor, and the total labor per month of several enterprises

FORM S-11

MONTHLY LABOR SUMMARY

These tables provide for a monthly labor summary for different enterprises. Monthly totals can be calculated from daily labor records which are not a part of this book or estimated.

MONTH	ENTERPRISE											
	OPER.	FAMILY	HIRED	TOTAL	OPER.	FAMILY	HIRED	TOTAL	OPER.	FAMILY	HIRED	TOTAL
JANUARY												
FEBRUARY												
MARCH												
APRIL												
MAY												
JUNE												
JULY												
AUGUST												
SEPTEMBER												
OCTOBER												
NOVEMBER												
DECEMBER												
TOTAL												

X. Physical records allocating costs among various enterprises

A. Farm overhead is to record time spent on jobs that are not distinctly related to a single enterprise or portion of an enterprise. The enterprise totals added to farm overhead should equal the total labor used on the farm. Information needed for this record may be taken from the daily record

The enterprise totals plus farm overhead should correspond to the total labor supplied on the farm. Other available labor would be non-farm. Overhead jobs include such things as machinery and building repair, farmstead cleanup, purchasing of supplies, banding, etc.

MONTH	FARM OVERHEAD, FARM TOTAL AND NON-FARM											
	FARM OVERHEAD				TOTAL FARM				NON-FARM			
	OPER.	FAMILY	HIRED	TOTAL	OPER.	FAMILY	HIRED	TOTAL	OPER.	FAMILY	HIRED	TOTAL
JANUARY												
FEBRUARY												
MARCH												
APRIL												
MAY												
JUNE												
JULY												
AUGUST												
SEPTEMBER												
OCTOBER												
NOVEMBER												
DECEMBER												
TOTAL												

INFORMATION SHEET

B. The daily record is useful in that it supplies necessary data for both labor and machinery records that are required for a complete analysis. The daily record is contained in a pocket logbook that may be conveniently carried by each worker to record work activities

Name:

DAILY RECORD

DATE	ENTERPRISE	MAN HRS.	NO. UNITS	TRACTOR		TRUCK		EQUIPMENT USED	JOB DONE
				No.	Hrs.	No.	Mi.		

XI. Use of home products record--Records of products used in the home are useful for balancing other records such as the livestock production summary. If this is not done, production expenses are overstated and returns are understated. This record is also needed for income tax reporting purposes. Products consumed by the cooperator and family are not considered a taxable income. However if they are not reported as income, expenses incurred in producing those products cannot be deducted. If these production expenses are deducted, then the value of the products consumed should be reported as income, as it is taxable

INFORMATION SHEET

FORM S-1

HOME USED PRODUCTS

The value placed on home used products should approximate their production cost or the increase in expense due to their production.

	ITEM	QUANTITY	PRICE UNIT	AMOUNT	ITEM	QUANTITY	PRICE UNIT	AMOUNT
1				$	COLUMN TOTAL fwd.			$
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18	COLUMN TOTALS							

TOTAL OPERATOR $

NOTES

ENTERPRISE ACCOUNTING
UNIT V

ASSIGNMENT SHEET #1--POST PHYSICAL RECORDS IN THE *OKLAHOMA YOUNG FARMER ASSOCIATION RECORD BOOK*

During a recent production period you had the following receipt and expense items:

9-1	Purchases 160 bu. of seed wheat at $4.00/bu
9-1	Purchased 160 cwt. of 18-46-0 fertilizer at $10.55/cwt
11-15	Purchased 100 head stocker steers, 400# each at $46.00/cwt
11-15	Purchased 60 cwt. starter feed for $480
2-1	Purchased 64 cwt. nitrogen at $22.00/cwt
2-15	Had insecticide applied, 160 ac. at $2.50/ac
3-15	Sold stockers off wheat, 98 head weighing 565 lbs. at $43.00/cwt
5-1	Purchased 101 head stocker steers, 505# each at $47.00/cwt
5-1	Purchased 125 lbs. salt and minerals for $7.50
6-20	Paid for custom combine, 160 ac. at $9.20/ac
6-20	Paid for custom hauling, 32 bu./ac. at $0.10/bu. or $3.20/ac
10-1	Sold summer stockers, 100 head weighing 690 lbs./head for $44.00/cwt

You also had a 10 acre hay meadow which produced 1.5 tons/acre prairie hay valued at $45.00/ton.

You had no livestock in your opening inventory and none were produced. One summer stocker died weighing 505 lbs. and two of the stockers on wheat died weighing 400 lbs. No livestock were consumed in the home and the closing inventory was zero. The protein supplement and starter feed that was purchased, as well as the prairie hay that was produced, was consumed by the stockers on wheat.

Record this data in the approriate financial and physical enterprise records.

ASSIGNMENT SHEET #1

FORM 1 **PAGE** **MONTH** **19__ FARM RECEIPTS**

LINE	DATE	TOTAL RECEIPTS $ ¢	DETAILED DESCRIPTION to whom, what, etc.	CROP SALES AMT. tons lbs. bu.	CROP SALES KIND write in below $ ¢	$ ¢	$ ¢	$ ¢	MISC. FARM RECEIPTS Gov't Paym'ts $ ¢	Custom Work $ ¢	Pat. Div., Refunds, Resales $ ¢	Cash Rent, Other $ ¢	LINE
			subtotals brought from preceding page										
1													1
2													2
3													3
4													4

FORM 5 **PAGE** **MONTH** **ENTERPRISE RECEIPTS**

ITEM DESCRIPTION, QUANTITY, ETC.	AMT. $ ¢	ITEM DESCRIPTION, QUANTITY, ETC.	AMT. $ ¢	ITEM DESCRIPTION, QUANTITY, ETC.	AMT. $ ¢	LINE
subtotals brought from preceding page						
						1
						2
						3
						4
						5

FORM 7 **PAGE** **MONTH** **19__ FARM EXPENDITURES**

LINE	DATE	TOTAL COST $ ¢	check no.	DETAILED DESCRIPTION WHAT WAS BOUGHT, FROM WHOM	HIRED LABOR $ ¢	REPAIRS $ ¢	INTEREST $ ¢	FEED lbs	$ ¢	SEEDS, PLANTS $ ¢	FERT., LIME, CHEM $ ¢	LINE
				subtotals brought from preceding page								
1												1
2												2
3												3
4												4
5												5
6												6
7												7
8												8
9												9
10												10
11												11
12												12
13												13
14												14

ASSIGNMENT SHEET #1

FORM 11 **PAGE** **MONTH** **ENTERPRISE EXPENDITURES**

ITEM DESCRIPTION QUANTITY, ETC.	AMT. $	AMT. ¢	ITEM DESCRIPTION QUANTITY, ETC.	AMT. $	AMT. ¢	ITEM DESCRIPTION QUANTITY, ETC.	AMT. $	AMT. ¢	LINE
subtotals brought from preceeding page									
									1
									2
									3
									4
									5
									6
									7
									8
									9
									10
									11
									12
									13
									14

FORM S-8

CROP RECORDS

FIELD NO. _____ SOIL _____
ACRES _____ CHARACTERISTICS _____

YEAR	CROP AND VARIETY	YIELD UNIT	YIELD PER ACRE	YIELD TOTAL	SEEDING RATE	FERTILIZER APPLIED	CHEMICALS APPLIED	COMMENTS

ASSIGNMENT SHEET #1

FORM S-7

LIVESTOCK PRODUCTION SUMMARY

This table summarizes number, weight and value increases or productions for the year. The number in L11 should be zero since the TOTAL number IN (L4) should balance the TOTAL number OUT (L9). Hence, L11 will indicate accounting errors in the number of livestock.

	DESCRIPTION	TYPE: NO.	TYPE: WEIGHT	TYPE: AMOUNT	TYPE: NO.	TYPE: WEIGHT	TYPE: AMOUNT	TYPE: NO.	TYPE: WEIGHT	TYPE: AMOUNT
1	Opening Inventory			$			$			$
2	Purchases									
3	Births		———	———		———	———		———	———
4	TOTAL IN			$			$			$
5	Closing Inventory									
6	Sales									
7	Home Consumed Products									
8	Deaths			———			———			———
9	TOTAL OUT			$			$			$
10	INVENTORY CHANGE (6-1)			$			$			$
11	NET INCREASE (11-5)			$			$			$

TOTAL LIVESTOCK INCREASE FORMS 8&9 $

FORM S-6

CROP AND FEED BALANCE

This table measures the accounting of the operator's share only. Hence the feed purchased, raised, sold, etc. refers to that belonging to the operator. Under livestock share arrangements it may be desirable to alter these measures to include the landlord's share.

		UNIT OF MEASURE	CROP OR FEED QTY.	AMOUNT	QTY.	AMOUNT	QTY.	AMOUNT	QTY.	AMOUNT
1	SOURCE OF FEED	Opening Inventory		$		$		$		$
2		Purchased								
3										
4		Crops Raised								
5		Total In								
6	FEED ACCOUNTED FOR	Closing Inventory								
7		Sales								
8										
9		Seeded								
10		Wastage, Spoilage								
11		Total Out								
12	TOTAL FEED FED* L5 - L11			$		$		$		$
13	FEED CONSUMED BY LIVESTOCK FROM FEED RECORDS	Beef								
14										
15										
16		Swine								
17										
18										
19		Dairy								
20										
21		Non-Prod. Lvstk.								
22										
23	TOTAL FEED RECORDED**			$		$		$		$
24	ERROR (DIFFERENCE) L12-23			$		$		$		$
25	TOTAL FEED FED AS DETERMINED FROM ALL SOURCES***			$		$		$		$

TOTAL WEIGHT OF ALL FEEDS FED ____ LBS.

TOTAL VALUE OF ALL FEEDS FED $

*As tabulated by difference from inventories, production, purchases and sales.
**As recorded from feed records.
***Final feed allocation, as determined from all sources.
****Convert all feeds to pounds and roughages to a 90% dry weight, feet equivalent, basis.

ASSIGNMENT SHEET #1

FORM S-9

CROP PRODUCTION SUMMARY

	CROP	UNIT	PRICE	OWNED LAND					RENTED LAND	
				YIELD	*ACRES	YIELD	PRODUCTION	AMOUNT	FIELD	ACRES
1	Cash Crops							$		
2										
3										
4										
5										
6										
7										
8	Small Grains									
9										
10										
11										
12										
13										
14										
15	Hay*									
16										
17										
18										
19										
20										
21										
22	Diverted acres	—	—			—	—			
23										
24										
25	Total crop acres	—	—	—		—	—	—	—	
26	Rotated pasture									
27										
28										
29	Total rotated acres	—	—	—		—	—	—	—	
30										
31	Improved permanent pasture									
32	Native unimproved pasture									
33										
34	Woodland	—	—	—		—	—		—	
35	Waste, etc.	—	—	—		—	—	—	—	
36	Farmstead	—	—	—		—	—	—	—	
37	Total Farm	—	—	—		—	—	$	—	

*Report hay acres from multiple cuttings, and double crop acres only once

FORM S-10

CROP PRODUCTION SUMMARY (Continued)

	RENTED LAND (Continued)								WHOLE FARM			
	YIELD	PRODUCTION	AMOUNT	LANDLORD SHARE			OPERATOR SHARE		*ACRES	YIELD	PRODUCTION	AMOUNT
				%	QTY.	AMOUNT	QTY.	AMOUNT				
1			$			$		$				$
2												
3												
4												
5												
6												
7												
8												
9												
10												

ENTERPRISE ACCOUNTING
UNIT V

ANSWERS TO ASSIGNMENT SHEET #1

FORM I **PAGE** **MONTH** **19__ FARM RECEIPTS**

LINE	DATE	TOTAL RECEIPTS $	¢	DETAILED DESCRIPTION to whom, what, etc.	CROP SALES AMT: tons lbs. bu.	KIND: write in below Wheat $	¢	$	¢	$	¢	$	¢	MISC. FARM RECEIPTS Gov't Paym'ts $	¢	Custom Work $	¢	Pat. Div., Refunds, Resales $	¢	Cash Rent, Other $	¢	LINE
				subtotals brought from preceding page																		
1	3-15	23809.10		Steers																		1
2	6-20	12032.00		Wheat	5120	12032.00																2
3	10-1	30360.00		Steers																		3
4																						4

FORM 5 **PAGE** **MONTH** **ENTERPRISE RECEIPTS**

Stockers on Wheat			Wheat			Summers Stockers			LINE
ITEM DESCRIPTION, QUANTITY, ETC.	AMT. $	¢	ITEM DESCRIPTION, QUANTITY, ETC.	AMT. $	¢	ITEM DESCRIPTION, QUANTITY, ETC.	AMT. $	¢	
subtotals brought from preceeding page									
98 Head	23909	10							1
			5120 bu. @ 2.35	12032	00				2
						100 Head	30360	00	3
									4

FORM 7 **PAGE** **MONTH** **19__ FARM EXPENDITURES**

LINE	DATE	TOTAL COST $	¢	CHECK NO.	DETAILED DESCRIPTION WHAT WAS BOUGHT, FROM WHOM	HIRED LABOR $	¢	REPAIRS $	¢	INTEREST $	¢	FEED lbs	$	¢	SEEDS, PLANTS $	¢	FERT., LIME, CHEM. $	¢	LINE
					subtotals brought from preceeding page														
1		640	00		Seed Wheat										640	00			1
2		1688	00		Fertilizer												1688	00	2
3		18400	00		400# Steers														3
4		7	50		Salt & Minerals								7	50					4
5		450	00		Protein Suppl.								450	00					5
6		480	00		Starter Feed								480	00					6
7		1408	00		Nitrogen												1408	00	7
8		400	00		Insecticide												400	00	8
9		23972	00		500# Steers														9
10		7	50		Salt & Minerals								7	50					10
11		1472	00		Custom Combine														11
12		512	00		Custom Hauling														12
13																			13
14																			14

FORM 11 **PAGE** **MONTH** **ENTERPRISE EXPENDITURES**

Wheat			Stockers on Wheat			Summer Stockers			LINE
ITEM DESCRIPTION QUANTITY, ETC.	AMT. $	¢	ITEM DESCRIPTION QUANTITY, ETC.	AMT. $	¢	ITEM DESCRIPTION QUANTITY, ETC.	AMT. $	¢	
subtotals brought from preceeding page									
160 bu. Seed	640	00							1
Fertilizer	1688	00							2
18-46-0			100 Head	18400	00				3
			Salt & Minerals	7	50				4
			Protein Suppl.	450	00				5
			Starter Feed	480	00				6
Nitrogen	1408	00							7
Insecticide	400	00							8
						101 Head	23972	35	9
						Salt & Minerals	7	50	10
Custom Combine	1472	00							11
Custom Hauling	512	00							12
									13
									14

FORM S-8

CROP RECORDS

FIELD NO. ACRES 160 Acres					SOIL CHARACTERISTICS			
YEAR	CROP AND VARIETY	YIELD UNIT	YIELD PER ACRE	YIELD TOTAL	SEEDING RATE	FERTILIZER APPLIED	CHEMICALS APPLIED	COMMENTS
78	Wheat	Bu.	32	5,120	60 lbs. per Ac.	40 lbs. per Acre	18-46-0 Insecticide	

FORM S-7

LIVESTOCK PRODUCTION SUMMARY

This table summarizes number, weight and value increases or productions for the year. The number in L11 should be zero since the TOTAL number IN (L4) should balance the TOTAL number OUT (L9). Hence, L11 will indicate accounting errors in the number of livestock.

	DESCRIPTION	TYPE: Summer Stockers NO.	WEIGHT	AMOUNT	TYPE: Stockers on Wheat NO.	WEIGHT	AMOUNT	TYPE: NO.	WEIGHT	AMOUNT
1	Opening Inventory	0		$	0		$			$
2	Purchases	101	51,005	23,972 35	100	40,000	18,400 00			
3	Births									
4	TOTAL IN	101	51,005	$ 23,972 35	100	40,000	$ 18,400 00			$
5	Closing Inventory	0			0					
6	Sales	100	69,000	30,360 00	98	55,370	23,890 10			
7	Home Consumed Products									
8	Deaths	1	505		2	800				
9	TOTAL OUT	101	69,505	$ 30,360 00	100	56,170	$ 23,890 10			$
10	INVENTORY CHANGE (6-1)	0		$	0		$			$
11	NET INCREASE (11-5)		18,500	$ 6,387 65		16,710	$ 5,409 10			$

TOTAL LIVESTOCK INCREASE FORMS 8&9 $

FORM S-6

CROP AND FEED BALANCE

This table records the accounting of the operator's share only. Hence the feed purchased, used, sold, etc. refers to that belonging to the operator. Under livestock share arrangements it may be desirable to alter these instructions to include the landlord's share.

		UNIT OF MEASURE	CROP OR FEED: Salt & Minerals QTY. Lbs.	AMOUNT	Prairie Hay QTY. Tns.	AMOUNT	Protein Suppl. QTY. Lbs.	AMOUNT	Starter Feed QTY. Cwt.	AMOUNT
1		Opening Inventory		$		$		$		$
2	SOURCE OF FEED	Purchased	250	15 00			4500	450 00	60	480 00
3										
4		Crops Raised			15	675 00				
5		Total In	250	15 00	15	675 00	4500	450 00	60	480 00
6	FEED ACCOUNTED FOR	Closing Inventory								
7		Sales								
8										
9		Seeded								
10		Wastage, Spoilage								
11		Total Out								
12	TOTAL FEED FED* L5 - L11		250	$ 15 00	15	$ 675 00	4500	$ 450 00	60	$ 480 00
13	FEED CONSUMED BY LIVESTOCK FROM FEED RECORDS	Beef Summer Stockers	125	7 50						
14		Stockers on Wheat	125	7 50	15	675 00	4500	450 00	60	480 00
15										
16		Swine								
17										
18										
19		Dairy								
20										
21		Non-Prod. Lvstk								
22										
23	TOTAL FEED RECORDED**		250	$ 15 00	15	$ 675 00	4500	$ 450 00	60	$ 480 00
24	ERROR (DIFFERENCE) L12-23			$		$		$		$
25	TOTAL FEED FED AS DETERMINED FROM ALL SOURCES***		250	$ 15 00	15	$ 675 00	4500	$ 450 00	60	$ 480 00

*As tabulated by difference from inventories, production, purchases and sales.
**As recorded from feed records.
***Final feed allocation as determined from all sources.
****Convert all feeds to pounds and roughages to a 90% dry weight hay equivalent basis.

TOTAL WEIGHT OF ALL FEEDS FED 40,750 LBS.

TOTAL VALUE OF ALL FEEDS FED $ 1,620.00

FORM S-9

CROP PRODUCTION SUMMARY

	CROP	UNIT	PRICE	OWNED LAND					RENTED LAND	
				FIELD	*ACRES	YIELD	PRODUCTION	AMOUNT	FIELD	ACRES
1	Cash Crops							$		
2										
3										
4										
5										
6										
7										
8	Small Grains Wheat	Bu.	2.35		160	32	5,120	12,032 00		
9										
10										
11										
12										
13										
14										
15	Hay* Prairie	Tn.	45.00		10	1.5	15	675 00		
16										
17										
18										
19										
20										
21										
22	Diverted acres	—	—			—	—			
23										
24										
25	Total crop acres	—	—	—		—	—	—	—	
26	Rotated pasture									
27										
28										
29	Total rotated acres	—	—	—		—	—	—	—	
30										
31	Improved permanent pasture									
32	Native unimproved pasture									
33										
34	Woodland	—	—	—		—	—	—	—	
35	Waste, etc	—	—	—		—	—	—	—	
36	Farmstead	—	—	—		—	—	—	—	
37	Total Farm	—	—	—		—	—	$	—	

*Report hay acres from multiple cuttings, and double crop acres only once

FORM S-10

CROP PRODUCTION SUMMARY (Continued)

	RENTED LAND (Continued)								WHOLE FARM			
	YIELD	PRODUCTION	AMOUNT	LANDLORD SHARE			OPERATOR SHARE		*ACRES	YIELD	PRODUCTION	AMOUNT
				%	QTY.	AMOUNT	QTY.	AMOUNT				
1			$			$		$				$
2												
3												
4												
5												
6												
7												
8									160	32	5,120	12,032 00
9												
10												
11												
12												
13												
14												
15									10	1.5	15	675 00
16												
17												
18												

ENTERPRISE BUDGETS
UNIT VI

UNIT OBJECTIVE

After completion of this unit, the cooperator should be able to use enterprise budgets, obtain information, modify and analyze returns of enterprise budgets. This knowledge will be evidenced through demonstration and completion of assignment sheets.

SPECIFIC OBJECTIVES

After completion of this unit, the cooperator should be able to:

1. Match terms associated with enterprise budgets to the correct definitions.
2. List uses of enterprise budgets.
3. Name benefits of enterprise budgets.
4. Describe specific sections of enterprise budgets.
5. Describe Oklahoma State University Cooperative Extension Service Enterprise Budgets.
6. Discuss modifications to the enterprise budgets.
7. Describe different categories of returns in the enterprise budgets.
8. Use information contained in enterprise budgets.
9. Make modifications to enterprise budgets.
10. Use information contained on the "back side" of the enterprise budget.
11. Use breakeven analysis.

ENTERPRISE BUDGETS
UNIT VI

SUGGESTED ACTIVITIES

I. Suggested activities for the instructor:

A. Provide cooperator with objective sheet.

B. Provide cooperator with information and assignment sheets.

C. Make transparencies.

D. Discuss unit and specific objectives.

E. Discuss information and assignment sheets.

F. Give cooperator name and address of area agent from which enterprise budgets may be obtained for your area.

G. Demonstrate methods of modifying OSU Enterprise Budgets.

II. Instructional materials:

A. Objective sheet

B. Information sheet

C. Assignment sheets

1. Assignment Sheet #1--Using Information Contained in an Enterprise Budget

2. Assignment Sheet #2--Making Modifications to Enterprise Budgets

3. Assignment Sheet #3--Using Information Contained on the "Back Side" of the Budget

4. Assignment Sheet #4--Using Breakeven Analysis

D. Answers to assignment sheets

III. Unit references:

A. Jobes, Raleigh A., III. *Use of Budgets in Farm Management.* Stillwater: Oklahoma State University, Oklahoma State University Extension Facts No. 139, 1976.

B. Casey, James E., Jobes, Raleigh A., III., and Walker, Odell L. *Enterprise Budgets--A Farm Planning Tool.* Stillwater: AE 7707, Department of Agricultural Economics, Oklahoma State University, ND.

C. Farm Management Extension. *Enterprise Budgets--Oklahoma Crop and Livestock Budgets.* Stillwater: Cooperative Extension Service, Oklahoma State University, ND.

ENTERPRISE BUDGETS
UNIT VI

INFORMATION SHEET

I. Terms and definitions

A. Budget--Physical and financial plan for the operation of a farm for a specific period of time

Examples: Total or complete budgets, partial budgets, enterprise budgets

(NOTE: A basic need in any of the three types of budgeting is an estimation of costs and returns for individual enterprises. The estimation of costs and returns for each enterprise is usually done by the concept of enterprise budgeting.)

B. Total or complete budget--Physical and financial plan for the entire business for some period of time

C. Partial budget--Estimates the economic effect of adjustments in some portion of the farm business

D. Enterprise budget--Statement of expected returns associated with particular production practices and yields. Cost and returns are estimated for one unit of a particular enterprise

(NOTE: Most farmers do not do the detail work involved in enterprise budgeting, but rather use prepared representative budgets and modify them to more closely represent their own situation. The Oklahoma State Cooperative Extension Service has developed representative enterprise budgets for the major crop and livestock enterprises in Oklahoma. These budgets are available to producers and should be used as the basis for the major budgeting and planning procedures. See map on following page.)

E. AUM--Animal unit month; the amount of pasture required to sustain one cow-calf unit for one month

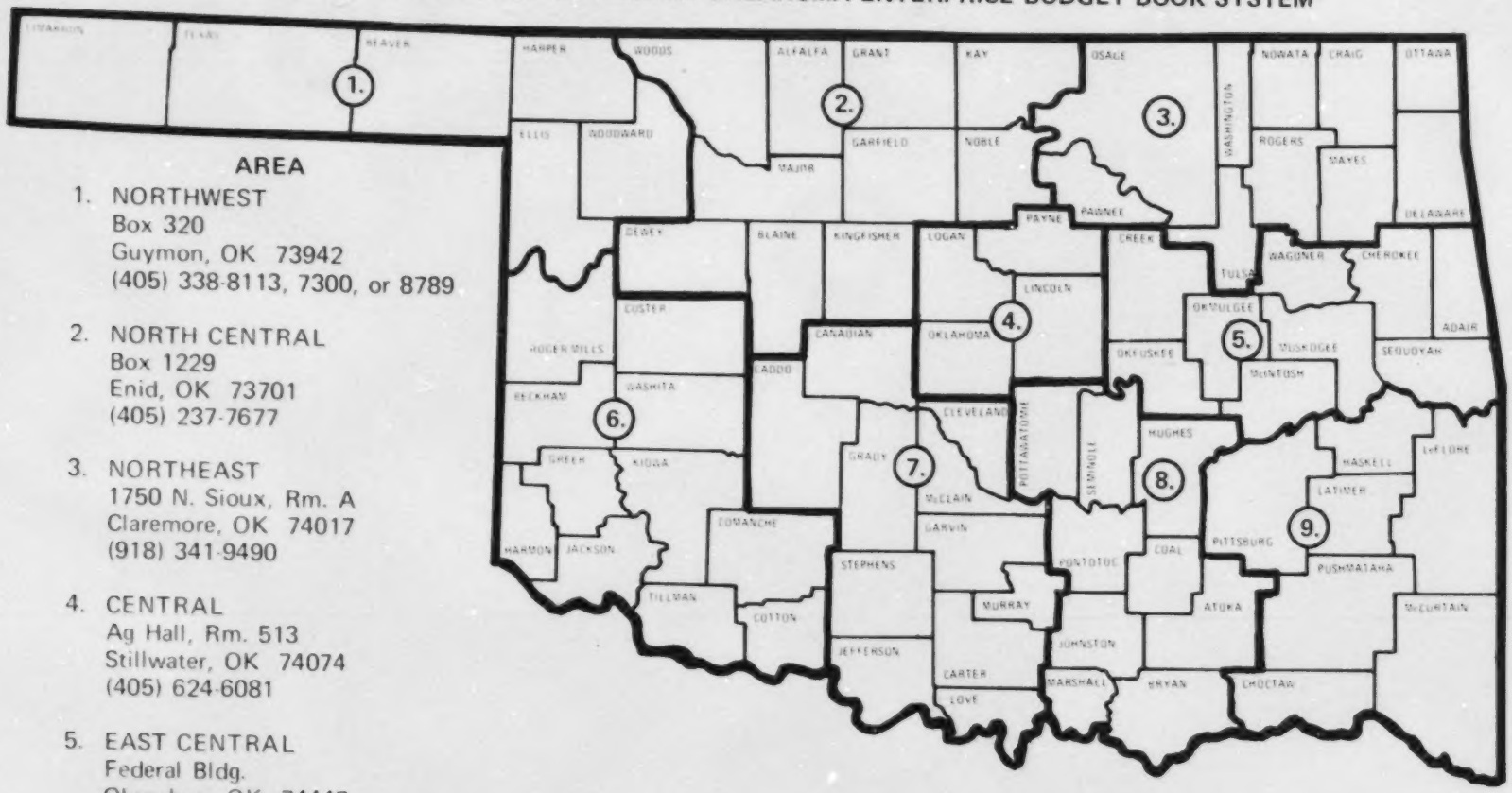
II. Uses of enterprise budgets

A. Uses linear programming or budgets for farm planning

B. Estimates potential income for particular farm situations

C. Estimates the size of farm needed to earn a certain labor-owned capital item

OKLAHOMA STATE UNIVERSITY
AGRICULTURAL ECONOMICS EXTENSION OKLAHOMA ENTERPRISE BUDGET BOOK SYSTEM



AREA

1. NORTHWEST
   Box 320
   Guymon, OK 73942
   (405) 338-8113, 7300, or 8789

2. NORTH CENTRAL
   Box 1229
   Enid, OK 73701
   (405) 237-7677

3. NORTHEAST
   1750 N. Sioux, Rm. A
   Claremore, OK 74017
   (918) 341-9490

4. CENTRAL
   Ag Hall, Rm. 513
   Stillwater, OK 74074
   (405) 624-6081

5. EAST CENTRAL
   Federal Bldg.
   Okmulgee, OK 74447
   (918) 756-1958

6. SOUTHWEST
   Courthouse
   Altus, OK 73521
   (405) 482-4382

7. W. SOUTH CENTRAL
   Courthouse, Rm. 113
   Duncan, OK 73533
   (405) 255-0510

8. E. SOUTH CENTRAL
   1700 N. Broadway
   Ada, OK 74820
   (405) 332-2153

9. SOUTHEAST
   Courthouse
   McAlester, OK 74501
   (918) 423-5519

INFORMATION SHEET

D. Estimates cash flows during the year

E. Estimates the cost of production for different agricultural products

III. Benefits of enterprise budgets

A. Gives cooperator the ability to compare costs and returns for alternative mixes of enterprises and alternative plans for farm organization without actually committing resources

B. Forces decision maker to uncover costs that might otherwise be overlooked

C. Makes a good impression on loan officers, and therefore, can be an asset when seeking credit for business operations

IV. Specific sections of enterprise budgets

(NOTE: Although producers lack the information necessary to make perfect decisions, they are forced to make decisions on the basis of the information they possess. An enterprise budget presents a method for farmers to classify the information which they possess in such a manner that they can analyze the information and form a plan of action.)

A. Income--Enterprise budgets deal with future actions and it is difficult to make accurate estimates regarding future prices and yields. Historical data provides a sound basis for establishing initial levels of budget input data. Several options are available in evaluating future prices, such as forward contracting and hedging techniques

B. Expenses--There are three general types of costs that make up the total cost of producing any farm commodity. These are *variable costs, fixed costs,* and *overhead costs*

1. *Variable costs* may be thought of as the cost of items that will be used up during one year's operation or during one production period. Variable costs are always included in an enterprise budget

   Examples: Seed, feed, fertilizer, normal repairs, custom or hourly labor, tractor operating expenses

2. *Fixed costs* are costs associated with buildings and equipment which are prorated over a period of years

   Examples: Depreciation, interest, insurance, taxes on individual buildings and pieces of equipment

INFORMATION SHEET

3. *Overhead costs* are costs of machinery and buildings that cannot be allocated to an individual enterprise. Since these items are involved in the production of many commodities produced on an individual farm, it is difficult to include them in individual enterprise budgets. These items are included in whole farm budgets but not in enterprise budgets

C. Returns--Amount which is available to pay for the remaining factors of production after variable costs have been deducted from total receipts. In an Oklahoma Representative Enterprise Budget, these remaining factors of production are capital cost, ownership cost, labor cost, and land charge or rent. After charges have been made for these factors of production, the remainder is the return to overhead, risk, and management

D. Time period--An enterprise budget for an annual crop or livestock activity, such as wheat for grain or stocker steers, will show costs and returns for one production period. For a perennial crop activity, such as alfalfa, the budget is also presented on a yearly basis; however, establishment costs are included on an amortized basis

Example: If the alfalfa crop is expected to last five years, one-fifth of the establishment cost is considered each year. Another way to look at this is as a yearly replacement in order to maintain productivity of the crop. For a perennial livestock activity, such as a cow-calf enterprise, costs and returns of replacement heifers and cull cows are included. This is done to maintain stability and productivity of the herd

V. Oklahoma State University Cooperative Extension Service Enterprise Budgets

(NOTE: On the following page is an example of a wheat budget developed by the Oklahoma State University Cooperative Extension Service for southeastern Oklahoma #76900101.)

A. Production--Section that shows what products are produced and their value. Each product is broken down within the section to show the units that the production is measured in, the expected price per unit, the amount of production, and the value of this production. This input data is based on information secured from a number of sources including averages taken from the records of area farmers who are enrolled in the Oklahoma State University COSTFINDER Record Program. Since these values will probably vary from what any individual can expect to realize on their home farm, a final column is provided to record your value, the amount of gross income a cooperator can expect to realize from the production of this crop

WHEAT - LOAM SOILS

INFORMATION SHEET

FBM I - 121
76900101
08/15/78
SOUTHEAST

CATEGORY	UNITS	PRICE	QUANTITY	VALUE	YOUR VAL
PRODUCTION:					
WHEAT	BU.	2.750	30.000	82.50	
GRAZING	AUMS	0.0	0.800	0.0	
TOTAL RECEIPTS				82.50	
OPERATING INPUTS:					
WHEAT SEED	BU.	3.500	1.500	5.25	
NITROGEN (N)	LBS.	0.160	50.000	8.00	
PHOSPH (P2O5)	LBS.	0.120	40.000	4.80	
POTASH (K2O)	LBS.	0.070	40.000	2.80	
FERT. SPREADER	ACRE	1.350	1.000	1.35	
TRACTOR FUEL & LUBE	ACRE			0.98	
TRACTOR REPAIR COST	ACRE			0.53	
EQUIP. FUEL & LUBE	ACRE			1.16	
EQUIP. REPAIR COST	ACRE			1.97	
TOTAL OPERATING COST				26.83	
RETURNS TO LAND,LABOR,CAPITAL,MACHINERY, OVERHEAD,RISK,AND MANAGEMENT				55.67	
CAPITAL COST:					
ANNUAL OPERATING CAPITAL		0.097	14.696	1.43	
TRACTOR INVESTMENT		0.097	7.902	0.77	
EQUIPMENT INVESTMENT		0.097	79.353	7.70	
TOTAL INTEREST CHARGE				9.89	
RETURNS TO LAND, LABOR, MACHINERY, OVERHEAD, RISK AND MANAGEMENT				45.78	
OWNERSHIP COST: (DEPRECIATION, TAXES, INSURANCE)					
TRACTOR	HR.			0.95	
EQUIPMENT	HR.			12.42	
TOTAL OWNERSHIP COST				13.37	
RETURNS TO LAND, LABOR, OVERHEAD, RISK AND MANAGEMENT				32.41	
LABOR COST:					
MACHINERY LABOR	HR.	3.100	1.285	3.98	
TOTAL LABOR COST			1.285	3.98	
RETURNS TO LAND, OVERHEAD, RISK AND MANAGEMENT				28.43	
LAND CHARGE OR RENT:					
LAND INVESTMENT	ACRE	0.0	0.0	0.0	
LAND TAXES	ACRE			0.0	
TOTAL LAND CHARGE				0.0	
RETURNS TO OVERHEAD, RISK AND MANAGEMENT				28.43	

STARKS

09/23/78 0000000010

Courtesy Oklahoma State University Cooperative Extension/Department of Agricultural Economics

INFORMATION SHEET

B. Operating inputs--The front of the budget lists all operating inputs that have gone into the production of the product. Inputs in this section coincide with the typical definition of variable costs. The total operating costs are then subtracted from the total receipts, giving a return to land, labor, capital, machinery, overhead, risk and management

OPERATING INPUTS:				
WHEAT SEED	BU.	3,500	1,500	5,25
NITROGEN (N)	LBS.	0,160	50,000	8,00
PHOSPH (P2O5)	LBS.	0,120	40,000	4,80
POTASH (K2O)	LBS.	0,070	40,000	2,80
FERT. SPREADER	ACRE	1,350	1,000	1,35
TRACTOR FUEL & LUBE	ACRE			0,98
TRACTOR REPAIR COST	ACRE			0,53
EQUIP. FUEL & LUBE	ACRE			1,16
EQUIP. REPAIR COST	ACRE			1,97
TOTAL OPERATING COST				26,83
RETURNS TO LAND,LABOR,CAPITAL,MACHINERY, OVERHEAD,RISK,AND MANAGEMENT				54,67

1. On the flip side of the budget, operating inputs are broken down by month. This type of information may be quite useful in planning the purchase of operating inputs. This section also shows the machinery requirement by month. This information may also be quite useful in that it provides the necessary data to produce a yearly machinery flow. Next is a monthly summary of receipts and expenses. This gives the timing of receipts and expenses by month and the amount of each. This data is very valuable in producing the cash flow statement

Example: Machinery costs are included on enterprise budgets. The formula to calculate some capital costs on a tractor investment are as follows:

$$\text{Interest/Hour} = \frac{\text{Average Interest} \times \text{Interest Rate}}{\text{Number of Hours Used Annually}}$$

$$\text{Average Investment} = \frac{\text{Purchase Price} + \text{Salvage Value}}{2}$$

Interest on Tractor = Interest/Hour x Hours used x 1.1
Per Acre Investment

Tractor Investment = Interest Value ÷ Interest Rate

OPERATING INPUTS	RATE/UNIT												PRICE	NUMBER UNITS	UNIT COMP	ITEM CODE	TYPE	COST
11 WHEAT SEED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.0	0.0	0.0	=1.000	0.0	2.	176.	3.	0.
12 NITROGEN (N)	0.0	0.0	30.00	0.0	0.0	0.0	0.0	0.0	20.00	0.0	0.0	0.0	=1.000	0.0	12.	211.	3.	0.
13 PHOSPH (P2O5)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40.00	0.0	0.0	0.0	=1.000	0.0	12.	216.	3.	0.
14 POTASH (K2O)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40.00	0.0	0.0	0.0	=1.000	0.0	12.	216.	3.	0.
15 FERT. SPREADER	0.0	0.0	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	=1.000	0.0	7.	341.	3.	0.
MACHINERY REQUIREMENTS	TIMES OVER												XXXXX	XXXXX	UNIT	MACH CODE	TYPE	COST
38 TANDEM DISK	0.0	0.0	0.0	0.0	0.0	1.00	0.0	0.0	1.00	0.0	0.0	0.0	0.0	0.0	1.	38.	6.	0.
39 DRILL NO/FERT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.0	0.0	0.0	0.0	0.0	1.	40.	6.	0.
40 SP COMBINE-GRAIN	0.0	0.0	0.0	0.0	0.0	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.	40.	6.	0.
41 TRUCK	0.0	0.0	0.0	0.0	0.0	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.	18.	6.	0.
42 DRY FERT SPREAD	0.0	0.0	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.	69.	6.	0.

INFORMATION SHEET

C. Capital cost--Each cost is computed separately, then added together to give the total interest charge. This total interest charge is then subtracted from the previous residual to give the return to land, labor, machinery, overhead, risk, and management. Annual operating capital is calculated by taking the amount required each month times the portion of the year that the amount will be outstanding, except for enterprises that have more than one sale period. In that case, net expenses for each month are used to calculate annual capital. This is broken down by month on the back of the budget

CAPITAL COST:			
ANNUAL OPERATING CAPITAL	0.097	14,696	1.43
TRACTOR INVESTMENT	0.097	7,902	0.77
EQUIPMENT INVESTMENT	0.097	79,353	7.70
TOTAL INTEREST CHARGE			9.89
RETURNS TO LAND, LABOR, MACHINERY, OVERHEAD, RISK AND MANAGEMENT			85.78

D. Ownership cost--Includes only the fixed costs of depreciation, taxes, and insurance. It is figured on a per acre basis for both tractors and equipment. Total ownership cost is subtracted from returns to capital, to give the return to land, labor, overhead, risk, and management. The back of the budget shows these costs broken down on a per hour basis and on a per acre basis. Also shown on a per hour and on a per acre basis are total variable costs

OWNERSHIP COSTS (DEPRECIATION, TAXES, INSURANCE)		
TRACTOR	HR.	0.95
EQUIPMENT	HR.	12.42
TOTAL OWNERSHIP COST		13.37
RETURNS TO LAND, LABOR, OVERHEAD, RISK AND MANAGEMENT		32.41

		MACHINERY FIXED AND VARIABLE COSTS PER HOUR							TOTAL		
MACHINE	CODE	DEPR	INSUR.	TAX	TOTAL FIXED	REPAIR	FUEL	LUB.	VARIABLE	INT.	HR/TIME
TRACTOR (3)	3	1.18	0.07	0.18	1.42	0.79	1.27	0.19	2.25	1.16	1.00
TRUCK	10	2.15	0.08	0.22	2.45	2.40	2.16	0.32	4.88	1.30	1.00
SP COMBINE-GRAIN	16	30.04	1.34	5.80	35.22	3.60	2.24	0.34	6.17	22.29	0.26
TANDEM DISK	38	4.28	0.14	0.52	4.98	0.97	0.0	0.0	0.97	2.97	0.12
DRILL W/FERT	40	4.66	0.20	0.58	5.40	1.05	0.0	0.0	1.05	3.21	0.20
DRY FERT SPREAD	69	1.84	0.08	0.22	2.13	0.81	0.0	0.0	0.81	1.24	0.09

OPERATION	ITEM NO.	DATE	TIMES OVER	LABOR HOURS	MACHINE HOURS	FUEL,OIL,LUB., REPAIR PER ACRE	FIXED COSTS PER ACRE
TANDEM DISK	3,38	SEP	1.00	0.119	0.115	0.40	1.26
DRILL W/FERT	3,40	SEP	1.00	0.347	0.286	1.01	3.24
DRY FERT SPREAD	3,69	MAR	1.00	0.112	0.093	0.27	0.58
TANDEM DISK	3,38	JUN	1.00	0.139	0.115	0.40	1.26
SP COMBINE-GRAIN	16	JUN	1.00	0.308	0.257	1.58	14.75
TRUCK	10,10	JUN	0.20	0.248	0.200	2.05	1.32
TOTAL				1.245	1.066	5.71	22.66

COLUMN NAME OF MACHINE	1 CODE	2 WIDTH (FEET)	3 INITIAL LIST PRICE	4 SPEED (MPH)	5 FIELD EFFICIENCY	6 RCI	7 RC2	8 RC3	9 HOURS USED ANNUALLY	10 YEARS OWNED	11 RFV1	12 RFV2	13 PURCHASE PRICE	14 FUEL TYPE	15 HOURS OF LIFE	16 HP
TRACTOR (3)	3.	60.0	12000.	4.5	0.88	1.20	0.000031	1.00	600.	10.0	0.680	0.990	10000.	3.	12000.	60.
TRUCK	10.	2.0	12000.	20.0	0.80	0.80	0.001585	1.00	500.	8.0	0.670	0.860	11000.	1.	6000.	1.
SP COMBINE-GRAIN	16.	14.0	38000.	3.0	0.67	0.33	0.000251	1.00	100.	10.0	0.835	0.895	34000.	3.	2000.	1.
TANDEM DISK	38.	18.0	5200.	4.8	0.83	0.65	0.000251	1.00	100.	10.0	0.680	0.885	5200.	0.	2000.	0.
DRILL W/FERT	40.	10.0	2816.	4.0	0.72	0.65	0.000251	1.00	90.	10.0	0.680	0.885	2816.	0.	1000.	0.
DRY FERT SPREAD	69.	25.0	1100.	4.3	0.67	0.65	0.000251	1.00	50.	10.0	0.580	0.885	1100.	0.	1000.	0.

INFORMATION SHEET

(NOTE: A quantity is listed for the amount of grazing that is available; however, no price and consequently no value is listed for this production. This is due to the wide range of prices realized by producers, and whether or not this production is utilized. Individual producers' may assign their own price to this production. Livestock budget is similar in format to the crop budget, but contains one additional section. This section is livestock investment. It shows total livestock investment on a per-cow basis. These values are also averages for the area being considered. Individual producers value will probably differ from these listed.)

WHEAT - LOAM SOILS

7A900101
05/15/7A
SOUTHEAST

CATEGORY	UNITS	PRICE	QUANTITY	VALUE	YOUR VAL
PRODUCTION:					
WHEAT	BU.	2.750	30.000	82.50	
GRAZING	AUMS	0.0	0.800	0.0	
TOTAL RECEIPTS				82.50	

1. On the back of the budget, information presented on the front page is shown in more detail. Figure 3 is the back of the wheat budget presented earlier. The first section shows production of each product by month

2. Breakdown by month has another important aspect. This is considering the timing of production and the timing of requirements for that production. An example of this relationship is the AUM requirements of a cow-calf enterprise. Assuming each cow-calf unit requires 12 AUM's per year, and the pasture produces 12 AUM's per year, then it would appear that each acre would support one cow-calf unit for one year. However, when timing of the AUM production of the pasture is considered, each acre may be able to support 2 cow-calf units during the summer months and only .5 cow-calf units during the remainder of the year. From this, it can be seen that the timing of production may be an extremely important aspect of planning

LINE	1 JAN	2 FEB	3 MAR	4 APR	5 MAY	6 JUN	7 JUL	8 AUG	9 SEP	10 OCT	11 NOV	12 DEC	13 PRICE	14 WEIGHT	15 UNIT CODE	16 ITEM CODE	17 TYPE	18 CONT
PRODUCTION					NUMBER OF UNITS													
1 WHEAT	0.0	0.0	0.0	0.0	0.0	30.00	0.0	0.0	0.0	0.0	0.0	0.0	=1.000	0.0	2.	7A.	2.	0.
2 GRAZING	0.20	0.20	0.20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.10	0.10	=1.000	0.0	10.	A0.	2.	0.

INFORMATION SHEET

E. Labor cost--Various types of labor are multiplied times the labor rate per hour and added together to give the total labor cost. Total labor cost is then subtracted from the previous return to give the return to land, overhead, risk, and management. On the back of the budget, the labor requirements are broken down by month. With this data, it is possible to produce a labor flow budget in order to better plan total labor needs

LABOR COST:					
MACHINERY LABOR	HR.	3.100	1.285	3.98	_____
TOTAL LABOR COST			1.285	3.98	_____
RETURNS TO LAND, OVERHEAD, RISK AND MANAGEMENT				28.43	_____

LABOR REQUIREMENTS BY MONTH

MACHINERY LABOR	HR.	0.0	0.0	0.11	0.0	0.0	0.09	0.0	0.0	0.09	0.0	0.0	0.0	1.29

F. Land charge or rent--Budgets presented show no land charges due to the difficulty in assigning a specific value to this resource. The individual producer could use a rental rate, equitable return on land capital investment, a debt servicing commitment, or some other charge that is applicable to the cooperator's situation. Land taxes or other land charges also should be included. The total land charge is then subtracted from the returns to land, overhead, risk, and management, to give a residual return to overhead, risk, and management

LAND CHARGE OR RENT:					
LAND INVESTMENT	ACRE	0.0	0.0	0.0	_____
LAND TAXES	ACRE			0.0	_____
TOTAL LAND CHARGE				0.0	_____
RETURNS TO OVERHEAD, RISK AND MANAGEMENT				28.43	_____

VI. Modifications to the Oklahoma State University Enterprise Budgets

(NOTE: A primary purpose of these budgets is to encourage producers who do not have complete records to consider their full cost of production in making decisions. These budgets are designed to serve as guidelines. Many modifications are possible to tailor a budget to fit the individual's situation.)

A. Production

1. Yield--Based on an average for the area being considered. Each individual producer will probably obtain a different yield. Historical production records are probably the best single source for determining the yield that may be expected from any specific field. The budget should be modified to reflect the situation that exists for the individual producer

2. Price--Enterprise budgets deal with future actions and it is difficult to make accurate estimates regarding future prices. Historical data may provide some insights into the applicable price. Also, forward contracting and hedging techniques may be valuable in evaluating future prices. Again, the budget should be modified to reflect the situation that exists for the individual producer

B. Inputs and practices--Data on inputs and farming practices are taken from various sources. These costs will probably not be the same as the cost structure faced by the individual producer. An individual operator's own enterprise records are the most valuable planning tool from which to evaluate their cost structure. However, many producers do not keep such enterprise records

Examples: Fertilizer rates, seed varieties, cultivation practices, pasture availability, types of feed used, culling procedure, and death loss. These are only a few of the modifications that may be made. A complete list would be endless

VII. Categories of returns in the Oklahoma State University Enterprise Budgets

A. Returns to land, labor, capital, machinery, overhead, risk, and management--Return above variable cost; needed for short-run analysis. In the short-run, as long as this return is positive, operator should continue to produce because at least part of the fixed cost will be paid, thus reducing losses. If this return is negative, operator should not produce because variable costs are not being covered and losses would be minimized by not producing

B. Capital cost--In representative budgets, interest is charged on all capital. However, the individual producer may have this capital on hand and may not wish to consider this cost. If the producer can supply half the capital, then the producer may wish to consider only half of the capital cost. However, if a charge is not made for owned capital, the analysis of the profitability of the enterprise will not be accurate as all costs will not be considered. The cost associated with owned capital is the opportunity cost of capital. An opportunity cost is what is given up by not investing in the next best alternative. For analysis purposes, a common opportunity cost is the interest rate. After capital cost has been subtracted from the previous residual, the value that remains is the return to land, labor, machinery, overhead, risk, and management

C. Ownership costs--Include depreciation, taxes, and insurance. Ownership costs will vary from one operation to another due to different cost structure faced by different firms. These costs should be adjusted to fit individual situations. When ownership costs are subtracted from the previous return, the remainder is return to land, labor, overhead, risk, and management

INFORMATION SHEET

D. Labor cost--Value of labor cost is computed by multiplying the total quantity of labor times the price of labor. As with capital, if the individual producer supplies part or all of the labor, then the individual may not wish to consider her/his own labor cost. However, if a charge is not made for operator supplied labor, the analysis of the profitability of the enterprise will not be accurate as all costs of production will not be considered. As with capital, there is an opportunity cost associated with labor. The opportunity cost of labor may vary greatly due to differences in skills and experience. The price of labor used in the budgets is an average of the agricultural labor rates of the area under consideration. Labor cost is then subtracted from the previous residual to give the return to land, overhead, risk, and management

E. Land charge or rent--It is difficult to assign a specific value for this resource on the budget. In order for the analysis of an enterprise to be accurate, the producer should subtract a charge that is applicable to his/her situation. When the land charge or rent is subtracted from the previous residual, the remainder is the return to overhead, risk, and management

F. Returns to overhead, risk, and management--Return above all costs and is needed for long-run analysis. In the long-run, if this return is not positive, another enterprise should be considered

(NOTE: These returns and costs may be combined in different ways to yield additional management information. For example, residual returns to owned capital or labor and management may be of interest.)

ENTERPRISE BUDGETS
UNIT VI

ASSIGNMENT SHEET #1--USING INFORMATION CONTAINED IN AN ENTERPRISE BUDGET

Use the attached budgets to obtain the indicated information.

Cow-Calf Enterprise 11901618

1. Annual operating capital _____
2. Price of machinery labor _____
3. Percent calf crop _____
4. Steer weight _____
5. Amount of hay fed _____
6. Native pasture needed _____
7. Return above operating inputs and annual capital and ownership costs _____

Grain Sorghum Enterprise 73903001

1. Seeding rate _____
2. Grazing _____
3. Price of milo _____
4. Amount of nitrogen _____
5. Tractor investment _____
6. Amount of labor required per acre _____
7. Return above operating inputs, capital and ownership costs _____

ASSIGNMENT SHEET #1

COW-CALF COST & RETURNS / PER COW, 100 UNITS
SPRING CALVING, BERMUDA-FESCUE PASTURE
CARRYOVER STEERS THRU WINTER & SELL IN JULY

11901618
08/31/78
SOUTHEAST

LIVESTOCK INVESTMENT	UNITS	SIZE	NUMBER	VALUE/UNIT	VALUE	YOUR VALUE
BEEF COW	CWT.	9.50	1.00	425.000	425.00	
BEEF BULL	CWT.	16.00	0.03	950.000	28.50	
BEEF HEIFER	CWT.	8.00	0.12	325.000	39.00	
TOTAL LIVESTOCK INVESTMENT					492.50	

PRODUCTION	UNITS	QUANTITY	WEIGHT	PRICE	VALUE/UNIT	VALUE	YOUR VALUE
STRS (5-7) CH	CWT.	0.43	8.11	59.500	482.54	207.49	
HFR CALV(3-5) CH	CWT.	0.31	4.30	55.000	236.50	73.31	
CULL COWS	CWT.	0.10	9.50	37.000	351.50	35.15	
AGED BULL	CWT.	0.01	16.00	42.000	672.00	6.72	
TOTAL RECEIPTS						322.68	

OPERATING INPUTS	UNITS	RATE PER UNIT	NUMBER OF UNITS	TOTAL UNITS	PRICE	VALUE	
8-10% PRO. FEED	LBS.	420.00	1.00	420.000	0.06	25.20	
41-45% PRO. SUP.	LBS.	60.00	1.12	67.200	0.09	6.38	
GRASS HAY	TONS	0.20	1.12	0.224	40.00	8.96	
SALT & MIN.	LBS.	31.00	1.12	34.720	0.06	2.08	
VET & MED.	DOL.	1.00	1.12	1.120	6.00	6.72	
PERSONAL TAXES	HD.	1.00	1.00	1.000	2.00	2.00	
HAULING & MKTG.	CWT.	5.93	1.00	5.930	0.75	4.45	
LVSTOCK SUPPLIES	HD.	1.00	1.12	1.120	4.75	5.32	
BULLS, HERD	CWT.	0.01	16.00	0.160	55.00	8.80	
MACH. FUEL & LUBE						3.42	
MACHINERY REPAIR COST						2.85	
EQUIPMENT REPAIR						1.32	
TOTAL OPERATING COST						77.50	

RETURNS TO LAND,LABOR,CAPITAL,MACHINERY,OVERHEAD,RISK AND MANAGEMENT	245.18

CAPITAL COST	PRICE	AMOUNT	VALUE	YOUR VALUE
ANNUAL OPERATING CAPITAL	0.097	26.358	2.56	
MACHINERY INVESTMENT	0.097	20.445	1.98	
EQUIPMENT INVESTMENT	0.097	62.880	6.10	
LIVESTOCK INVESTMENT	0.097	492.500	47.77	
TOTAL INTEREST CHARGE			58.41	

RETURNS TO LAND,LABOR,MACHINERY,OVERHEAD,RISK AND MANAGEMENT	186.77

OWNERSHIP COST: (DEPRECIATION, TAXES, INSURANCE)			
MACHINERY	DOL.		3.46
EQUIPMENT	DOL.		6.30
TOTAL OWNERSHIP COST			9.76

RETURNS TO LAND, LABOR, OVERHEAD, RISK AND MANAGEMENT	177.01

LABOR COSTS	PRICE	HOURS	
MACHINERY LABOR	3.100	2.640	8.18
EQUIPMENT LABOR	3.100	0.538	1.67
LIVESTOCK LABOR	3.100	6.200	19.22
TOTAL LABOR COST		9.378	29.07

RETURNS TO LAND,OVERHEAD,RISK AND MANAGEMENT	147.93

PASTURE CHARGES	UNITS	TOTAL UNITS	PRICE	
BERMUDA PASTURE	AUMS	9.41	0.0	0.0
FESCUE PASTURE	AUMS	8.56	0.0	0.0
PASTURE INVESTMENT	DOL.	0.0	0.0	0.0
PASTURE TAXES				0.0
TOTAL PASTURE CHARGES				0.0

RETURNS TO OVERHEAD,RISK AND MANAGEMENT	147.93

86% WEANED CALF CROP
COWS FED 41% CSM, STEERS FED 8-10% PROTEIN FEED
STEERS ADG OCT-FEB .8#, ADG MAR-JULY 1.70#

STARKS & BARNES
09/18/78 0000000010

Courtesy Oklahoma State University Cooperative Extension/Department of Agricultural Economics

ASSIGNMENT SHEET #1

GRAIN SORGHUM BUDGET
BOTTOMLAND
OWNED EQUIPMENT

73903001
08/15/78
SOUTHEAST

CATEGORY	UNITS	PRICE	QUANTITY	VALUE	YOUR VALUE
PRODUCTION:					
MILO	CWT.	3.800	40.000	152.00	
GRAZING	AUMS	0.0	0.400	0.0	
TOTAL RECEIPTS				152.00	
OPERATING INPUTS:					
GRAIN SORG SEED	LBS.	0.360	5.000	1.80	
NITROGEN (N)	LBS.	0.160	70.000	11.20	
PHOSPH (P2O5)	LBS.	0.120	40.000	4.80	
POTASH (K2O)	LBS.	0.070	60.000	4.20	
INSECTICIDE	ACRE	3.000	1.000	3.00	
HERBICIDE	ACRE	5.000	1.000	5.00	
FERT. SPREADER	ACRE	1.350	1.000	1.35	
TRACTOR FUEL & LUBE	ACRE			3.01	
TRACTOR REPAIR COST	ACRE			1.91	
EQUIP. FUEL & LUBE	ACRE			1.16	
EQUIP. REPAIR COST	ACRE			3.13	
TOTAL OPERATING COST				40.56	
RETURNS TO LAND, LABOR, CAPITAL, MACHINERY, OVERHEAD, RISK, AND MANAGEMENT				111.44	
CAPITAL COST:					
ANNUAL OPERATING CAPITAL		0.097	12.672	1.23	
TRACTOR INVESTMENT		0.097	28.300	2.75	
EQUIPMENT INVESTMENT		0.097	79.650	7.73	
TOTAL INTEREST CHARGE				11.70	
RETURNS TO LAND, LABOR, MACHINERY, OVERHEAD, RISK AND MANAGEMENT				99.74	
OWNERSHIP COST: (DEPRECIATION, TAXES, INSURANCE)					
TRACTOR	HR.			3.40	
EQUIPMENT	HR.			12.41	
TOTAL OWNERSHIP COST				15.81	
RETURNS TO LAND, LABOR, OVERHEAD, RISK AND MANAGEMENT				83.93	
LABOR COST:					
MACHINERY LABOR	HR.	3.100	2.045	6.34	
TOTAL LABOR COST			2.045	6.34	
RETURNS TO LAND, OVERHEAD, RISK AND MANAGEMENT				77.59	
LAND CHARGE OR RENT:					
LAND INVESTMENT	ACRE	0.0	0.0	0.0	
LAND TAXES	ACRE			0.0	
TOTAL LAND CHARGE				0.0	
RETURNS TO OVERHEAD, RISK AND MANAGEMENT				77.59	

INSECTICIDE & HERBICIDE-CUSTOM APPLICATION

STARKS

08/12/78

0000000010

Courtesy Oklahoma State University Cooperative Extension/Department of Agricultural Economics

ENTERPRISE BUDGETS
UNIT VI

ASSIGNMENT SHEET #2--MAKING MODIFICATIONS TO ENTERPRISE BUDGETS

Assume you farm in north central Oklahoma and you have the opportunity to rent additional farm land for $25 per acre. Assume you are restricted to raising grain sorghum. You acquired a copy of the attached Enterprise Budget (73201904) from the Extension Service at Oklahoma State University. You have reviewed the budget and want to modify some of the basic assumptions used. Based on your managerial ability and your knowledge of the subject property, you feel that you can reasonably expect a yield of only 22 cwt./acre, and the level of 18-46-0 fertilizer may be cut by one-fourth. You also have enough owned capital to cover operating expenses and do not wish to charge for annual operating capital; however, the interest rate on your remaining investment is 10%. Your labor cost is $3.50/hr. Compute your return to overhead, risk, and management.

Total receipts _____

Total operating costs _____

Returns to land, labor, capital, machinery, overhead, risk, and management _____

Capital cost _____

Returns to land, labor, machinery, overhead, risk, and management _____

Ownership cost _____

Returns to land, labor, overhead, risk, and management _____

Labor cost _____

Returns to land, overhead, risk, and management _____

Land rent _____

Returns to overhead, risk, and management _____

How many acres would be required to provide a $6,000 return to overhead risk and management _____

How many hours of labor would be required to provide that return? _____

GRAIN SORGHUM
OWNED HARVEST EQUIPMENT

ASSIGNMENT SHEET #2

73201904
01/11/78
NORTHCENTRAL

CATEGORY	UNITS	PRICE	QUANTITY	VALUE	YOUR VALUE
PRODUCTION:					
MILO	CWT.	3.900	24.000	93.60	
GRAZING	AUMS	0.0	0.200	0.0	
TOTAL RECEIPTS				93.60	
OPERATING INPUTS:					
GRAIN SORG SEED	LBS.	0.360	5.000	1.80	
18-46-0 FERT	CWT.	8.750	1.000	8.75	
NITROGEN (N)	LBS.	0.150	33.500	5.02	
FERT. SPREADER	ACRE	1.500	1.000	1.50	
2-4-D	LBS.	1.500	0.500	0.75	
TRACTOR FUEL & LUBE	ACRE			3.36	
TRACTOR REPAIR COST	ACRE			2.12	
EQUIP. FUEL & LUBE	ACRE			1.14	
EQUIP. REPAIR COST	ACRE			3.29	
TOTAL OPERATING COST				27.74	
RETURNS TO LAND,LABOR,CAPITAL,MACHINERY, OVERHEAD,RISK,AND MANAGEMENT				65.86	
CAPITAL COST:					
ANNUAL OPERATING CAPITAL		0.090	10.530	0.95	
TRACTOR INVESTMENT		0.090	31.213	2.81	
EQUIPMENT INVESTMENT		0.090	60.992	5.49	
TOTAL INTEREST CHARGE				9.25	
RETURNS TO LAND, LABOR, MACHINERY, OVERHEAD, RISK AND MANAGEMENT				56.61	
OWNERSHIP COST: (DEPRECIATION, TAXES, INSURANCE)					
TRACTOR	HR.			3.73	
EQUIPMENT	HR.			8.69	
TOTAL OWNERSHIP COST				12.42	
RETURNS TO LAND, LABOR, OVERHEAD, RISK AND MANAGEMENT				44.19	
LABOR COST:					
MACHINERY LABOR	HR.	3.000	2.188	6.56	
OTHER LABOR	HR.	3.000	0.200	0.60	
TOTAL LABOR COST			2.388	7.16	
RETURNS TO LAND, OVERHEAD, RISK AND MANAGEMENT				37.02	
LAND CHARGE OR RENT:					
LAND INVESTMENT	ACRE	0.0	0.0	0.0	
LAND TAXES	ACRE			0.0	
TOTAL LAND CHARGE				0.0	
RETURNS TO OVERHEAD, RISK AND MANAGEMENT				37.02	

100# 18-46-0 PLUS 100# 33.5-0-0

01/20/78

SHARKEY
0100C00000

Courtesy Oklahoma State University Cooperative Extension/Department of Agricultural Economics

ENTERPRISE BUDGETS
UNIT VI

ASSIGNMENT SHEET #3--USING INFORMATION CONTAINED ON THE "BACK SIDE" OF THE BUDGET

Use the attached budget (Cow-Calf Enterprise 11401118) to obtain the indicated information.

1. What month are calves sold? _____
2. How much prairie hay is required in April? _____
3. How many hours/cow is the pickup used in February? _____
4. What is the total labor requirement for March? _____
5. What are the total receipts in January? _____
6. What was sold to generate the January receipts? _____
7. How many miles of 4-wire fence are needed to handle 100 cow units? _____
8. What is the fixed cost/cow of the pickup? _____
9. How much do the beef heifers weigh? _____
10. How many hours per year are required to maintain a mile of fence? _____

ASSIGNMENT SHEET #3

BUDGET IDENTIFICATION NUMBER 1140115104 814 8 ANNUAL CAPITAL MONTH 10 BUDGET RECORD NUMBER 15 BUDGET FILE 1

CON-CALF COSTS & RETURNS PER COW
100 COW UNIT SIZE. SPRING CALVING
NATIVE PASTURE

1140115104
03/11/70
CENTRAL

LINE	1 JAN	2 FEB	3 MAR	4 APR	5 MAY	6 JUN	7 JUL	8 AUG	9 SEP	10 OCT	11 NOV	12 DEC	13 PRICE	14 WEIGHT	15 UNIT CODE	16 ITEM CODE	17 TYPE	18 CONT
PRODUCTION					NUMBER OF UNITS													
1 STR CALVES(3-5) CR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.46	0.0	0.0	-1.000	4.400	16.	13.	2.	0.
2 HFR CALVES(3-5) CR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.34	0.0	0.0	-1.000	4.450	16.	12.	2.	0.
3 COWS-COMMERCIAL	0.03	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.0	-1.000	9.500	16.	10.	2.	0.
4 AGRC BULL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	-1.000	16.000	16.	17.	2.	0.
OPERATING INPUTS					RATE/UNIT								PRICE	NUMBER UNITS	UNIT CODE	ITEM CODE	TYPE	CONT
11 36-43% PRO. SUP.	62.00	56.00	62.00	30.00	0.0	0.0	0.0	0.0	0.0	0.0	30.00	62.00	-1.000	1.120	12.	114.	3.	0.
12 GRAZING	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.0	1.120	10.	69.	3.	0.
13 PRAIRIE HAY	0.02	0.02	0.03	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.02	-1.020	1.120	3.	85.	3.	0.
14 SALT & MIN.	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	-1.000	1.120	12.	103.	3.	0.
15 VET & MED.	0.0	0.0	0.0	0.0	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.000	1.120	1.	416.	3.	0.
16 HAULING & MKTG.	0.25	0.0	0.25	0.0	0.0	0.0	0.0	0.0	0.0	0.50	0.0	0.0	5.000	1.000	1.	485.	3.	0.
17 PERSONAL TAXES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	3.000	1.000	1.	442.	3.	0.
18 BULLS, HERD	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	-1.000	16.000	16.	14.	3.	0.
MACHINERY REQUIREMENTS					HOURS								XXXXX	XXXXX	POWER UNIT	MACH CODE	TYPE	CONT
26 PICKUP	0.20	0.20	0.20	0.20	0.10	0.10	0.10	0.10	0.10	0.10	0.20	0.20	0.0	0.0	0.	11.	4.	0.
27 TRAILER	0.05	0.0	0.05	0.0	0.05	0.0	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.0	11.	90.	4.	0.
28 ROTARY MOWER	0.0	0.0	0.0	0.0	0.0	0.75	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.	92.	4.	0.
EQUIPMENT REQUIREMENTS													NUMBER UNITS	PROPORT OF COST	XXX	EQUIP CODE	TYPE	XXXX
38 4-WIRE FENCE													3.000	0.040	0.	1.	5.	0.
39 UTILITY SHED													1.000	0.010	0.	16.	5.	0.
LIVESTOCK INVESTMENT																		
44 BEEF COW													1.000	1.000	0.	51.	5.	0.
45 BEEF BULL													0.030	1.000	0.	53.	5.	0.
46 BEEF HEIFER													0.120	1.000	0.	52.	5.	0.
49 LIVESTOCK LABOR	0.63	1.20	1.23	0.29	0.30	0.29	0.29	0.15	0.27	0.26	0.47	0.63						

MONTHLY SUMMARY OF RECEIPTS AND EXPENDITURES

CATEGORY	YEAR	UNIT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
TOTAL RECEIPTS	1	DOL.	8.55	0.0	11.40	0.0	0.0	0.0	0.0	0.0	5.92	175.83	0.0	0.0	201.70
TOTAL VARIABLE COST	1	DOL.	9.21	7.23	9.71	6.27	5.35	3.48	11.16	0.71	0.71	3.37	4.75	10.80	72.75
ANNUAL CAPITAL	1	DOL.	1.35	1.95	1.81	2.36	2.76	3.07	4.00	4.06	3.63	0.0	0.40	1.30	26.60

LABOR REQUIREMENTS

MACHINERY LABOR	1 HOUR	0.30	0.24	0.30	0.24	0.18	1.03	1.03	0.12	0.12	0.18	0.24	0.24	4.21
LIVESTOCK LABOR	1 HOUR	0.63	1.20	1.23	0.29	0.30	0.29	0.29	0.15	0.27	0.26	0.47	0.63	5.92
EQUIPMENT LABOR	1 HOUR	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	3.63
TOTAL LABOR	1 HOUR	1.23	1.74	1.83	0.74	0.78	1.62	1.62	0.57	0.69	0.74	1.01	1.17	13.76

MACHINERY REQUIREMENTS BY MONTH

TRACTOR(2)	HOUR	0.0	0.0	0.0	0.0	0.0	0.83	0.83	0.0	0.0	0.0	0.0	0.0	1.65
PICKUP	HOUR	0.25	0.20	0.25	0.20	0.15	0.10	0.10	0.10	0.10	0.15	0.20	0.20	2.00
TRAILER	1 0.2) HOUR	0.05	0.0	0.05	0.0	0.05	0.0	0.0	0.0	0.0	0.05	0.0	0.0	0.20
ROTARY MOWER	1 1.5) HOUR	0.0	0.0	0.0	0.0	0.0	0.75	0.75	0.0	0.0	0.0	0.0	0.0	1.50

MONTHLY EQUIPMENT REQUIREMENTS AS A PROPORTION OF THE ITEMS WHOLE FARM USE

	NO.														
4-WIRE FENCE	3.0	1	MILE	0.0033	0.0033	0.0033	0.0033	0.0033	0.0033	0.0033	0.0033	0.0033	0.0033	0.0033	0.0400
UTILITY SHED	1.0	1	NO.	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0100
BEEF COW	1.0	1	CWT.	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	1.0000
BEEF BULL	0.0	1	CWT.	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	1.0000
BEEF HEIFER	0.1	1	CWT.	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	1.0000

THE FINAL ENTRY IN EACH ROW REPRESENTS THE PROPORTION OF THE ITEMS TIME ALLOCATED TO THE BUDGET UNIT

MACHINERY FIXED AND VARIABLE COST PER HOUR

MACHINE	CODE	DEPR	INSUR.	TAX	TOTAL FIXED	REPAIR	FUEL	LUB.	TOTAL VARIABLE	FAT.	HR/TIME
TRACTOR(2)	2	1.38	0.08	0.20	1.66	0.87	1.55	0.23	2.65	1.27	1.00
PICKUP	11	2.02	0.08	0.21	2.33	0.24	1.35	0.25	1.79	1.21	1.00
TRAILER	90	1.07	0.05	0.13	1.25	1.35	0.0	0.0	1.35	0.78	1.00
ROTARY MOWER	92	2.07	0.09	0.26	2.42	0.78	0.0	0.0	0.78	1.45	1.00

ANNUAL COST SUMMARY FOR EQUIPMENT AND LIVESTOCK

LINE NO.	ITEM	SIZE	UNIT	LIST PRICE	DEPRECIATION	INTEREST	INSURANCE	TAXES	REPAIRS	FUEL AND LUBE	HOURS LABOR	TOT OWNERSHP/YR	TOT OPERATING/YR
1	4-WIRE FENCE	1.00	MILE	1620.00	58.56	69.54	4.39	7.32	38.88	0.0	2.00	70.27	38.88
16	UTILITY SHED	400.00	NO.	1200.00	43.30	57.33	3.60	6.00	12.30	0.0	3.00	89.60	12.00
51	BEEF COW	9.50	CWT.	350.00	0.0	13.25	0.0	0.0	0.0	0.0	2.75	0.0	0.0
53	BEEF BULL	16.30	CWT.	800.00	0.0	76.00	0.0	0.0	0.0	0.0	10.00	0.0	0.0
52	BEEF HEIFER	8.00	CWT.	275.00	0.0	26.13	0.0	0.0	0.0	0.0	3.00	0.0	0.0

ANNUAL CHARGES MADE IN THIS BUDGET FOR EQUIPMENT AND LIVESTOCK

LINE NO.	ITEM	SIZE	UNIT	NUMBER ITEMS	PROPOR. CHARGED	OWNERSHP CHARGES	OPERATING CHARGES	INTERST CHARGES	LABOR HOURS CHARGED
1	4-WIRE FENCE	1.00	MILE	3.00	0.04	6.63	4.07	0.34	0.24
16	UTILITY SHED	400.00	NO.	1.00	0.01	0.90	0.12	0.57	0.03
51	BEEF COW	9.50	CWT.	1.30	1.30	0.0	0.0	33.25	2.70
53	BEEF BULL	16.00	CWT.	0.03	1.33	0.0	0.0	2.28	0.33
52	BEEF HEIFER	8.00	CWT.	0.12	1.00	0.0	0.0	3.13	0.36

COLUMN NAME OF MACHINE	1 CODE	2 WIDTH (FEET)	3 INITIAL LIST PRICE	4 SPEED (MPH)	5 FIELD EFFICIENCY	6 AGE	7 AE2	8 AE3	9 HOURS USED ANNUALLY	10 YEARS OWNED	11 APV1	12 APV2	13 PURCHASE PRICE	14 FUEL TYPE	15 HOURS OF LIFE	16 HP
TRACTOR(2)	2.	75.0	13116.	4.5	0.48	1.20	0.000E+01	1.60	600.	10.0	0.680	0.920	12160.	3.	12000.	75.
PICKUP	11.	6.5	5216.	20.0	0.48	0.60	0.000E+01	1.40	240.	6.0	0.603	0.885	5216.	1.	4000.	1.
TRAILER	90.	7.0	1350.	20.0	0.90	1.30	0.000E+01	1.00	100.	13.0	0.635	0.895	1350.	0.	1000.	0.
ROTARY MOWER	92.	6.0	1472.	6.0	0.81	0.95	0.000E+00	1.30	50.	10.0	0.560	0.865	1280.	0.	1000.	0.

COLUMN---	1	2	3	4	5	6	7	8	9	10	11
ITEM NAME	CODE	SIZE	UNIT	TYPE	LIST PRICE	PURCHASE PRICE	YEARS LIFE	SALVAGE PROP OF LIST	REPAIR PROP OF LIST	FUEL & LUB AS PROP	ANNUAL HOURS LABOR
4-WIRE FENCE	1.	1.00	16.	2.00	1620.00	1404.00	25.00	0.0	0.600	0.0	2.00
UTILITY SHED	16.	400.00	1.	2.00	1200.00	1200.00	15.00	0.0	0.150	0.0	3.00
BEEF COW	51.	9.50	16.	1.00	350.00	350.00	8.00	1.000	0.0	0.0	2.75
BEEF HEIFER	52.	8.00	16.	1.00	275.00	275.00	8.00	1.000	0.0	0.0	3.00
BEEF BULL	53.	16.00	16.	1.00	800.00	800.00	9.00	1.000	0.0	0.0	10.00

RANGE: COWS. PAT IN BAD WEATHER
ASSUMES 5/8 CALF CROP

COLAB-JOBES

MACHINERY COMPLEMENT 8
EQUIPMENT COMPLEMENT 5

Courtesy Oklahoma State University Cooperative Extension/Department of Agricultural Economics

ENTERPRISE BUDGETS
UNIT VI

ASSIGNMENT SHEET #4--USING BREAKEVEN ANALYSIS

Use the attached budgets to obtain the indicated information.

1. Using the corn budget 72340005 that is attached, what corn price is needed to cover operating costs? _____

2. What is the breakeven price for corn to cover total costs of production, excluding land? _____

3. What price is needed for corn to give the same returns to land, overhead, risk, and management as shown for soybeans in budget 98300002? _____

CORN (GRAIN)
CUSTOM HARVEST
DEEP, WELL DRAINED SOILS REQUIRED

ASSIGNMENT SHEET #4

72340005
01/11/
NORTHE

CATEGORY	UNITS	PRICE	QUANTITY	VALUE	YOUR VALUE
PRODUCTION:					
CORN	BU.	2.100	70.000	147.00	
GRAZING	AUMS	0.0	1.000	0.0	
TOTAL RECEIPTS				147.00	
OPERATING INPUTS:					
CORN SEED	LBS.	0.650	20.000	13.00	
NITROGEN (N)	LBS.	0.150	150.000	22.50	
PHOSPH (P205)	LBS.	0.120	60.000	7.20	
POTASH (K20)	LBS.	0.070	40.000	2.80	
LIME	ACRE	7.650	1.000	7.65	
HERBICIDE	ACRE	10.500	1.000	10.50	
HARVEST EXPENSE	BU.	0.250	70.000	17.50	
INSECTICIDE	ACRE	2.500	1.000	2.50	
SPREADER RENTAL	ACRE	1.500	0.500	0.75	
TRACTOR FUEL & LUBE	ACRE			4.24	
TRACTOR REPAIR COST	ACRE			2.38	
EQUIP. REPAIR COST	ACRE			2.52	
TOTAL OPERATING COST				93.54	
RETURNS TO LAND, LABOR, CAPITAL, MACHINERY, OVERHEAD, RISK, AND MANAGEMENT				53.46	
CAPITAL COST:					
ANNUAL OPERATING CAPITAL		0.090	36.688	3.30	
TRACTOR INVESTMENT		0.090	36.537	3.29	
EQUIPMENT INVESTMENT		0.090	28.066	2.53	
TOTAL INTEREST CHARGE				9.12	
RETURNS TO LAND, LABOR, MACHINERY, OVERHEAD, RISK AND MANAGEMENT				44.34	
OWNERSHIP COST: (DEPRECIATION, TAXES, INSURANCE)					
TRACTOR	HR.			4.53	
EQUIPMENT	HR.			4.40	
TOTAL OWNERSHIP COST				8.93	
RETURNS TO LAND, LABOR, OVERHEAD, RISK AND MANAGEMENT				35.41	
LABOR COST:					
MACHINERY LABOR	HR.	3.000	2.300	6.90	
TOTAL LABOR COST			2.300	6.90	
RETURNS TO LAND, OVERHEAD, RISK AND MANAGEMENT				28.51	
LAND CHARGE OR RENT:					
LAND INVESTMENT	ACRE	0.0	0.0	0.0	
LAND TAXES	ACRE			0.0	
TOTAL LAND CHARGE				0.0	
RETURNS TO OVERHEAD, RISK AND MANAGEMENT				28.51	

SOYBEANS COST & RETURNS
DEEP, LOAM TO CLAY LOAM SOILS
CUSTOM HARVEST

98300002
01/11/78
NORTHEAST

ASSIGNMENT SHEET #4

CATEGORY	UNITS	PRICE	QUANTITY	VALUE	YOUR VALUE
PRODUCTION:					
SOYBEANS	BU.	5.000	28.000	140.00	
TOTAL RECEIPTS				140.00	
OPERATING INPUTS:					
SOYBEAN SEED	BU.	9.000	1.000	9.00	
PHOSPH (P205)	LBS.	0.120	30.000	3.60	
POTASH (K20)	LBS.	0.070	15.000	1.05	
LIME	TONS	7.650	0.400	3.06	
HERBICIDE	ACRE	9.500	1.000	9.50	
CUSTOM COMBINE	ACRE	12.000	1.000	12.00	
CUSTOM HAULING	BU.	0.150	25.000	3.75	
SPREADER RENTAL	ACRE	1.500	0.500	0.75	
TRACTOR FUEL & LUBE	ACRE			4.21	
TRACTOR REPAIR COST	ACRE			2.50	
EQUIP. FUEL & LUBE	ACRE			0.16	
EQUIP. REPAIR COST	ACRE			2.41	
TOTAL OPERATING COST				52.00	
RETURNS TO LAND, LABOR, CAPITAL, MACHINERY, OVERHEAD, RISK, AND MANAGEMENT				88.00	
CAPITAL COST:					
ANNUAL OPERATING CAPITAL		0.090	16.439	1.48	
TRACTOR INVESTMENT		0.090	38.454	3.46	
EQUIPMENT INVESTMENT		0.090	28.145	2.53	
TOTAL INTEREST CHARGE				7.47	
RETURNS TO LAND, LABOR, MACHINERY, OVERHEAD, RISK AND MANAGEMENT				80.53	
OWNERSHIP COST: (DEPRECIATION, TAXES, INSURANCE)					
TRACTOR	HR.			4.77	
EQUIPMENT	HR.			4.37	
TOTAL OWNERSHIP COST				9.14	
RETURNS TO LAND, LABOR, OVERHEAD, RISK AND MANAGEMENT				71.40	
LABOR COST:					
MACHINERY LABOR	HR.	3.000	2.124	6.37	
TOTAL LABOR COST			2.124	6.37	
RETURNS TO LAND, OVERHEAD, RISK AND MANAGEMENT				65.03	
LAND CHARGE OR RENT:					
LAND INVESTMENT	ACRE	0.0	0.0	0.0	
LAND TAXES	ACRE			0.0	
TOTAL LAND CHARGE				0.0	
RETURNS TO OVERHEAD, RISK AND MANAGEMENT				65.03	

2.0 TONS LIME APPLIED EVERY 5 YEARS
HERBICIDE IS TREFLAN OR LASSO
SEED IS INCCULATED IF FOLLOWING OTHER CROPS

HUDGINS

01/23/78

001 0000000

Courtesy Oklahoma State University Cooperative Extension/Department of Agricultural Economics

BUDGET IDENTIFICATION NUMBER 116011186 010 0 ANNUAL CAPITAL MONTH 10 BUDGET RECORD NUMBER 15
BUDGET FILE 1

COW-CALF COSTS & RETURNS PER COW
100 COW UNIT SIZE. SPRING CALVING
NATIVE PASTURE

116011186
08/11/78
CENTRAL

LINE		1 JAN	2 FEB	3 MAR	4 APR	5 MAY	6 JUN	7 JUL	8 AUG	9 SEP	10 OCT	11 NOV	12 DEC	13 PRICE	14 WEIGHT	15 UNIT CODE	16 ITEM CODE	17 TYPE	18 CONT
	PRODUCTION					NUMBER OF UNITS													
1	STR CALVES-SI CR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.46	0.0	0.0	-1.000	4.600	16.	13.	2.	0.
2	HFR CALVES-SI CR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.36	0.0	0.0	-1.000	4.150	16.	12.	2.	0.
3	COWS-COMMERCIAL	0.03	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.0	-1.000	9.500	16.	10.	2.	0.
4	ACFC BULL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	-1.000	16.300	16.	17.	2.	0.
	OPERATING INPUTS					RATE/UNIT								PRICE	NUMBER UNITS	UNIT CODE	ITEM CODE	TYPE	CONT
11	36-0-28 PRD. SUP.	62.00	56.00	62.00	30.00	0.0	0.0	0.0	0.0	0.0	0.0	30.00	62.00	-1.000	1.120	12.	114.	3.	0.
12	GRAZING	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.0	1.120	10.	89.	3.	0.
13	PRAIRIE HAY	0.02	0.02	0.03	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.32	-1.000	1.120	3.	85.	3.	0.
14	SALT & MIN.	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	-1.000	1.120	12.	103.	3.	0.
15	VET & MED.	0.0	0.0	0.0	0.0	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.000	1.120	1.	416.	3.	0.
16	HAULING & MKTG.	0.25	0.0	0.25	0.0	0.0	0.0	0.0	0.0	0.0	0.50	0.0	0.0	5.000	1.800	1.	485.	3.	0.
17	PERSONAL TAXES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	3.000	1.000	1.	442.	3.	0.
18	BULLS, HEAD	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	-1.000	16.000	16.	14.	3.	0.
	MACHINERY REQUIREMENTS					HOURS								XXXXX	XXXXX	POWER UNIT CODE	MACH CODE	TYPE	CONT
26	PICKUP	0.20	0.20	0.20	0.20	0.10	0.10	0.10	0.10	0.10	0.10	0.20	0.20	0.0	0.0	0.	11.	4.	0.
27	TRAILER	0.05	0.0	0.05	0.0	0.05	0.0	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.0	11.	90.	4.	0.
28	ROTARY MOWER	0.0	0.0	0.0	0.0	0.0	0.75	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.	92.	4.	0.
	EQUIPMENT REQUIREMENTS													NUMBER UNITS	PROPORT OF COST	XXX EQUIP CODE	TYPE	XXXX	
38	4-WIRE FENCE													3.000	0.040	0.	1.	5.	0.
39	UTILITY SHED													1.000	0.010	0.	10.	5.	0.
	LIVESTOCK INVESTMENT																		
44	BEEF COW													1.000	1.000	0.	51.	5.	0.
45	BEEF BULL													0.030	1.300	0.	53.	5.	0.
46	BEEF HEIFER													0.120	1.000	0.	52.	5.	0.
49	LIVESTOCK LABOR	0.63	1.20	1.23	0.20	0.30	0.29	0.29	0.15	0.27	0.26	0.47	0.63						

MONTHLY SUMMARY OF RECEIPTS AND EXPENDITURES

CATEGORY	YEAR	UNIT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
TOTAL RECEIPTS	1	DOL.	0.55	0.0	11.40	0.0	0.0	0.0	0.0	0.0	5.92	175.83	0.0	0.0	201.70
TOTAL VARIABLE COST	1	DOL.	9.21	7.23	9.71	6.27	5.35	3.48	11.16	0.71	0.71	3.37	4.75	10.80	72.75
ANNUAL CAPITAL	1	DOL.	1.3	1.95	1.81	2.34	2.76	3.07	4.00	4.06	3.63	0.0	0.40	1.30	26.66
LABOR REQUIREMENTS															
MACHINERY LABOR	1	HOUR	0.30	0.24	0.30	0.24	0.18	1.03	1.03	0.12	0.12	0.18	0.24	0.24	4.21
LIVESTOCK LABOR	1	HOUR	0.63	1.20	1.23	0.20	0.30	0.29	0.29	0.15	0.27	0.26	0.47	0.63	5.92
EQUIPMENT LABOR	1	HOUR	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	3.63
TOTAL LABOR	1	HOUR	1.23	1.74	1.83	0.74	0.78	1.62	1.62	0.57	0.69	0.74	1.01	1.17	13.78
MACHINERY REQUIREMENTS BY MONTH															
TRACTORIZE		HOUR	0.0	0.0	0.2	0.0	0.0	0.83	0.83	0.0	0.0	0.0	0.0	0.0	1.65
PICKUP		HOUR	0.25	0.20	0.25	0.20	0.15	0.10	0.10	0.10	0.10	0.15	0.20	0.20	2.00
TRAILER	0.2	HOUR	0.05	0.0	0.05	0.0	0.05	0.0	0.0	0.0	0.0	0.05	0.0	0.0	0.25
ROTARY MOWER	1.5	HOUR	0.0	0.0	0.0	0.0	0.75	0.75	0.0	0.0	0.0	0.0	0.0	0.0	1.50

MONTHLY EQUIPMENT REQUIREMENTS AS A PROPORTION OF THE ITEMS WHOLE FARM USE

	NO.		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
4-WIRE FENCE	3.0	MILE	0.0033	0.0033	0.0033	0.0033	0.0033	0.0033	0.0033	0.0033	0.0033	0.0033	0.0033	0.0033	0.0400
UTILITY SHED	1.0	NO.	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0100
BEEF COW	1.0	CWT.	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	1.0000
BEEF BULL	0.0	CWT.	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	1.0000
BEEF HEIFER	0.1	CWT.	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	0.0833	1.0000

THE FINAL ENTRY IN EACH ROW REPRESENTS THE PROPORTION OF THE ITEMS TIME ALLOCATED TO THE BUDGET UNIT

MACHINERY FIXED AND VARIABLE COST PER HOUR

MACHINE	CODE	DEPR	INSUR.	TAX	TOTAL FIXED	REPAIR	FUEL	LUB.	TOTAL VARIABLE	INT.	HR/TIME
TRACTORIZE	2	1.38	0.06	0.20	1.65	0.87	1.55	0.23	2.65	1.27	1.00
PICKUP	11	2.22	0.28	0.21	2.71	0.24	1.35	0.29	1.79	1.21	1.00
TRAILER	90	1.07	0.05	0.11	1.23	1.35	0.0	0.0	1.35	0.78	1.00
ROTARY MOWER	92	2.07	0.04	0.26	2.42	0.78	0.0	0.0	0.78	1.65	1.00

ANNUAL COST SUMMARY FOR EQUIPMENT AND LIVESTOCK

LINE NO.	ITEM	SIZE	UNIT	LIST PRICE	DEPRECIATION	INTEREST	INSURANCE	TAXES	REPAIRS	FUEL AND LUBE	HOURS LABOR	TOT OWN-ERSHIP/YR	TOT OPERATING/YR
1	4-WIRE FENCE	1.00	MILE	1620.00	58.56	69.54	4.39	7.32	38.88	0.0	2.30	70.27	38.88
16	UTILITY SHED	400.00	NO.	1200.00	85.30	57.00	3.60	6.00	12.00	0.0	3.00	89.60	12.00
51	BEEF COW	9.50	CWT.	380.00	0.0	33.25	2.0	0.0	0.0	0.0	2.70	0.0	0.0
53	BEEF BULL	10.00	CWT.	800.00	0.0	70.00	0.0	0.0	0.0	0.0	10.00	0.0	0.0
52	BEEF HEIFER	1.00	CWT.	275.00	0.0	24.13	0.0	0.0	0.0	0.0	3.00	0.0	0.0

ANNUAL CHARGES MADE IN THIS BUDGET FOR EQUIPMENT AND LIVESTOCK

LINE NO.	ITEM	SIZE	UNIT	NUMBER ITEMS	PROPOR. CHARGED	OWNERSHIP CHARGES	OPERATING CHARGES	INTEREST CHARGES	LABOR HOURS CHARGED
1	4-WIRE FENCE	1.00	MILE	3.00	0.36	0.63	4.07	0.34	0.28
16	UTILITY SHED	400.00	NO.	1.00	0.01	0.90	0.12	0.07	0.03
51	BEEF COW	9.50	CWT.	1.00	1.00	0.0	0.0	33.25	2.70
53	BEEF BULL	10.00	CWT.	0.03	1.00	0.0	0.0	2.08	0.30
52	BEEF HEIFER	1.00	CWT.	0.12	1.00	0.0	0.0	3.13	0.36

COLUMN NAME OF MACHINE	1 CODE	2 WIDTH (FEET)	3 INITIAL LIST PRICE	4 SPEED (MPH)	5 FIELD EFFICIENCY	6 RCI	7 RCZ	8 RCJ	9 HOURS USED ANNUALLY	10 YEARS OWNED	11 REV1	12 REV2	13 PURCHASE PRICE	14 FUEL TYPE	15 HOURS OF LIFE	16 HP
TRACTORIZE	2.	75.0	13116.	6.5	0.48	1.23	0.300E-01	1.63	690.	10.0	0.680	0.920	12180.	3.	12000.	75.
PICKUP	11.	0.9	5216.	20.0	0.46	0.67	0.100E-01	1.63	250.	6.0	0.603	0.845	5216.	1.	6000.	1.
TRAILER	90.	7.0	1350.	23.0	0.90	1.31	0.100E-01	1.63	100.	15.0	0.635	0.895	1350.	0.	1000.	0.
ROTARY MOWER	92.	6.0	1672.	6.0	0.91	0.55	0.300E-01	1.33	50.	10.0	0.560	0.865	1280.	0.	1000.	0.

COLUMN	1	2	3	4	5	6	7	8	9	10	11
ITEM NAME	CODE	SIZE	UNIT	TYPE	LIST PRICE	PURCHASE PRICE	YEARS LIFE	SALVAGE PROP OF LIFE	REPAIR PROP	FUEL & LUB AS PROP	ANNUAL HOURS LABOR
4-WIRE FENCE	1.	1.00	16.	2.02	1620.00	1620.00	25.00	0.0	2.400	0.0	2.30
UTILITY SHED	16.	400.00	16.	2.00	1200.00	1200.00	15.00	0.	0.100	0.0	3.00
BEEF COW	51.	9.50	16.	1.00	380.00	380.00	0.00	1.000	0.0	0.0	2.70
BEEF HEIFER	52.	0.00	16.	1.00	275.00	275.00	0.00	1.000	0.0	0.0	3.00
BEEF BULL	53.	10.00	16.	1.00	800.00	800.00	0.00	1.000	0.0	0.0	10.00

RANGE, CWE, HAY IN BAD WEATHER
ASSUMES 92% CALF CROP

COEAA-JOBES

MACHINERY COMPLEMENT 4
EQUIPMENT COMPLEMENT 8

ENTERPRISE BUDGETS
UNIT VI

ANSWERS TO ASSIGNMENT SHEETS

Assignment Sheet #1

Cow-Calf Enterprise 11901618

1. $26.358
2. $3.25/hr
3. 86%
4. 811 lbs
5. .224 tons/unit
6. 17.97 AUM's
7. 245.62

Grain Sorghum Enterprise 73903001

1. 5 lbs./acre
2. .40 AUMs
3. $3.80/cwt.
4. 70.0 lbs./acre
5. $28.30/acre
6. 2.045 hrs./acre
7. $83.93 acre

Assignment Sheet #2

Total receipts	93.60
Total operating costs	27.74
Returns to land, labor, capital, machinery, overhead, risk, and management	65.86
Capital cost	9.25
Returns to land, labor, machinery, overhead, risk, and management	56.61
Ownership cost	12.42
Returns to land, labor, overhead, risk, and management	44.91
Labor cost	7.16
Returns to land, overhead, risk, and management	37.02
Land rent	25.00
Returns to overhead, risk, and management	12.02
Acres to provide a $6,000 return to overhead, risk, and management	6,000 ÷ $12.02/acre =499.17 acres
Hours of labor required	2.388 hrs./acre x 499.17 acres = 1192.02 hours

Assignment Sheet #3

1. October
2. .05 tons/cow unit
3. .2 hours/cow unit
4. 1.83 hours/cow unit
5. $8.55/cow unit
6. .03 beef cows/cow unit; with a 100 cow unit size, 3 cows
7. 3 miles
8. $2.30/cow unit
9. 800 lbs.
10. 2 hours/year/mile

Assignment Sheet #4

1. Price x 70 bu. = $93.54
   Price = $93.54÷70
   Price = $1.34/bu.

2. Total cost = $93.54 + $9.12 + $8.93 + $6.90 = $118.49/acre
   Price x 70 bu. = $118.49
   Price = $118.49÷70
   Price = $1.69/bu.

3. $118.49 + $65.03 = $183.52
   Price x 70 bu. = $183.52
   Price = $183.52÷70
   Price = $2.62/bu.

CASH FLOW
UNIT VII

UNIT OBJECTIVE

After completion of this unit, the cooperator should be able to discuss components of a cash flow statement. The cooperator also should be able to discuss factors that affect cash flow and complete a cash flow statement. This knowledge will be evidenced by completion of a home farm cash flow statement.

SPECIFIC OBJECTIVES

After completion of this unit, the cooperator should be able to:

1. Define cash flow.
2. Describe in a short paragraph the benefits of cash flow planning.
3. Discuss in a short paragraph the disadvantages of cash flow planning.
4. Distinguish between cash flow summary and cash flow estimate.
5. Match alternative approaches to constructing cash flow estimates to their correct descriptions.
6. Discuss in a short paragraph the relationship of a cash flow statement to other financial statements.
7. Name steps in making a cash flow estimate.
8. Discuss in a short paragraph cash flow projection using the *Oklahoma Young Farmer Association Record Book*.
9. List alternatives for altering cash flow.
10. Discuss in a short paragraph computerized cash flow planning.
11. Complete a cash flow statement.
12. Determine if you have sufficient inflows and outflows to warrant computerized cash flow.
13. Estimate family living expenditures.

CASH FLOW
UNIT VII

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

A. Provide cooperator with objective sheet.

B. Provide cooperator with information and assignment sheets.

C. Make transparencies.

D. Discuss unit and specific objectives.

E. Discuss information and assignment sheets.

F. Discuss computerized cash flow, only if cooperators in your program are interested. All others will use hand-kept cash flow records.

II. Instructional materials:

A. Objective sheet

B. Information sheets

C. Assignment sheets

1. Assignment Sheet #1--Complete a Cash Flow Statement

2. Assignment Sheet #2--Determine if you have Sufficient Inflows and Outflows to Warrant Computerized Cash Flow

3. Assignment Sheet #3--Estimate Famiy Living Expenditures

D. Answers to assignment sheets

III. Unit references:

A. Tubbs, Alan R., and Wegenhoft, Kenneth N. *Cash Flow Planning: Why?* Stillwater: Oklahoma State University, Oklahoma State University Extension Facts No. 707, 1973.

B. Roush, Clint E. *Cash Flow Planning: How?* Stillwater: Oklahoma State University, Oklahoma State University Extension Facts No. 708, 1975.

C. Osburn, Donald D., and Schneeberger, Kenneth C. *Modern Agricultural Management*. Englewood Cliffs, New Jersey: Prentice-Hall, 1978.

D. *Farm Business Analysis--Instructors Handbook*. Columbia: Missouri/ Instructional Materials Laboratory, 1975.

E. *Oklahoma Young Farmer Association Record Book*.

F. *Cash Flow Analysis Computer Input Form.* Stillwater: Oklahoma State University, Cooperative Extension/Agricultural Economics Department, N.D.

G. *Oklahoma Crop and Livestock Budgets.* Stillwater: Oklahoma State University, Cooperative Extension/Agricultural Economics Department, N.D.

CASH FLOW
UNIT VII

INFORMATION SHEET

I. Cash flow--A dated quantity of receipts and expenses. A flow concept is a dated quantity of inflows and outflows. This concept is useful for analysis purposes and is commonly applied to cash. It may contain information associated with labor utilization. Labor flow is a dated quantity of labor availability and labor requirements

II. Benefits of cash flow planning

A. Shows operator when excess cash is expected to be available and when to expect cash deficits--This allows the operator to anticipate how much and when borrowing will be necessary, when repayment is possible, and how much cash will be available for repayment

B. Makes possible a budgeted loan--Money is borrowed only for periods in which it is needed and which are known before the year begins, thus saving unnecessary interest expense

C. Provides a way for operator to financially plan for combined personal and business expenses--Family living expense is planned and no longer has to come after production needs

D. Places operator in a position to line up production supplies in advance--The operator can shop around to find the best prices and take advantage of discounts which may be available for paying cash

E. Allows farmer to examine how the farm plan will work in the coming year--Through the enterprise approach, operator can compare the effect of various crop and livestock enterprises on cash availability of the business

F. Provides means to make a sound financial plan at the beginning of the year, thus avoiding problems encountered by haphazard, last-minute planning--It also provides a means by which the operator can check the actual performance against the financial plan

G. Can determine if too much short-term debt is being carried by knowing exactly how much cash is required to service debts--A high proportion of short-term obligations can put a heavy strain on the firm's cash position and repayment capacity

H. Allows cooperator to see cash position throughout the year, thus making it known immediately whether or not the cash is available to make a proposed expenditure or for unanticipated expenses or investments

INFORMATION SHEET

I. Becomes essential for tax planning--Timing of purchases and sales can be of great importance in tax management. Planning income and expenses to take advantage of depreciation deductions and to make use of year-end tax management can mean tax savings

III. Disadvantages of cash flow planning

A. Amount of work and detail required to project cash flow is large--Time is required to locate and organize past records, and to make required calculations

B. Operator must keep a complete and accurate set of records--A cash flow analysis will provide an adequate estimate of future cash flows only if the information used in its construction is accurate

C. Use of cash flow procedures does not guarantee financial success--Use only helps increase the managerial capacity of the operator

IV. Cash flow summary versus cash flow estimate

(NOTE: A comparison of actual cash flows with cash flow estimate can be most useful since it compares performance with plans. It also can serve as a tool for communication between borrower and lender.)

A. Cash flow summary--Shows what has occurred over a previous time period; a calendar of actual cash flows

B. Cash flow estimate--Projection estimating cash flows over a future time period, usually one year

V. Alternative approaches to constructing cash flow estimates

A. Whole farm estimates--Developed by grouping expenses and income according to items; may be more convenient to use if previous records are being utilized as the basis for a cash flow estimate

Examples: All fertilizer expenses for all crops would be grouped as one item under fertilizer expense

B. Project cash flows on an enterprise basis--Grouping expenses according to the enterprise which incurred the expense; desirable when records are kept by enterprises or consideration is being given to adding another enterprise

Example: Fertilizer expenses would be listed under the various crop enterprises using fertilizer

INFORMATION SHEET

(NOTE: When an additional enterprise is being considered, the enterprise approach is most useful to determine the amount and timing of cash used and generated by that enterprise. If considerable credit is required to get into the new enterprise, the enterprise approach will indicate if there is an adequate cash flow to service the debt. If not, existing enterprises must be in a cash surplus position. If this cash surplus is not available, the entire operation could experience a squeeze on cash. Oklahoma State University Cooperative Extension Service Enterprise Budgets are useful in preparing cash flow estimates using the enterprise approach.)

VI. Relationship of cash flow statement to other financial statements

A. A cash flow statement is not a substitute for any of the other commonly used financial statements, such as the net worth statement and the income statement

(NOTE: Net worth and income statements provide a record of what has been accomplished in the past, and where the business currently stands financially.)

B. A cash flow estimate is primarily a projection of the cash flowing into and out of the business; it is not an estimate of how profitable the business will be, since it considers only cash transactions. To calculate profitability, many non-cash income and expense items need to be considered. In addition, cash income and expense items not related to the enterprise or business should be excluded

VII. Steps in making a cash flow estimate

A. Plan farm organization for the coming year by determining the number of acres of each crop enterprise and the number of head of each livestock enterprise to be included in next year's farm plans

B. Estimate the amount and timing of cash inflows that are expected to occur throughout the coming year

C. Estimate the timing and amount of cash outflows that are expected to occur during the coming year using past records, experience, and enterprise budgets

D. Make the necessary calculations to determine whether the cash position for a given period will be positive or negative, after the expected cash inflows and outflows are entered for each period of the year

(NOTE: For periods showing a negative cash position, money will need to be borrowed. In surplus months, money can be paid on the operating loan or accumulated in the cash balance.)

INFORMATION SHEET

VIII. Cash flow projection using the *Oklahoma Young Farmer Association Record Book*

A. Complete the family expenditure worksheet before completing the cash flow summary page used to summarize the coming year's family living expenditures. Because families in general do not know how much they spend for family living, they tend to underestimate the amount spent during the year

(NOTE: If family living expenditures are overestimated, a reserve is created for unexpected expenses, but if living expenditures are underestimated, an emergency situation may be created.)

B. Use Form 26 as either an estimate or a summary. It is arranged so that the line number of each item listed on the form's left hand side corresponds to the column number of the same item in the receipts and expenditures sections of the *Oklahoma Young Farmer Association Record Book*

C. Make necessary calculations to determine whether the cash position for a given period will be positive or negative

(NOTE: For periods showing a negative cash difference, money will need to be borrowed. For periods showing a positive cash difference, money can be paid on the operating loan or accumulated in the cash balance. If deficit periods are extensive, adjustments in the plan might be considered.)

IX. Alternatives for altering cash flow

(NOTE: A cash flow projection is only an estimate of how an individual wants the operation to work. It is up to the individual to make it work. Keeping an actual cash flow throughout the year and comparing it to the budget will permit a more accurate estimate next year.)

A. Rearrange purchases and sales of crops, livestock, and supplies

B. Rearrange capital expenditures by deferring new buildings, equipment purchases, and land improvements

C. Seek off-farm employment, part or full-time

D. Solicit custom work using available equipment

E. Introduce short-term livestock enterprises which will generate income quickly, being careful of increased risks

F. Refinance short-term debt using land equity

INFORMATION SHEET

X. Computerized cash flow planning

A. The ultimate success of cash flow planning depends upon the accuracy of the information and the effort which goes into it. Estimating costs and returns for each farm enterprise and making calculations necessary to summarize the cash flows take a considerable amount of time

B. A computer routine is available from the Oklahoma Cooperative Extension Service to calculate farm enterprise cash flows. The computer program utilizes data from Cooperative Extension Service Enterprise Budgets and additional information from an input form completed by the farm or ranch operator

CASH FLOW
UNIT VII

ASSIGNMENT SHEET #1--COMPLETE A CASH FLOW STATEMENT

Assume you are making plans for next year's production. You have two enterprises:

1. Wheat for grain--640 acres
2. Stock or steers on wheat--320 head in an average year

Expected operating receipts

1. March $81,505, from sale of stocker steers
2. June $51,200, from sale of wheat

There is no other expected income during the year.

Expected expenditures

January	Feed	$ 1,062
	Family living expense	1,000
	Fuel, oil, and lubricants	91
	Machinery repair and maintenance	49
	Building and fence repair	12
February	Fertilizer	$ 3,840
	Crop chemicals	1,600
	Income taxes	1,300
	Family living expenses	1,000
	Machinery hire	960
	Feed	774
	Fuel, oil, and lubricants	349
	Machinery repair and maintenance	214
	Building and fence repair	12
March	Miscellaneous farm expenses	$ 1,120
	Family living expenses	1,000
	Feed	459
	Truck hire	440
	Fuel, oil, and lubricants	91
	Machinery repair and maintenance	49
	Building and fence repair	12
April	Family living expenses	$ 1,000
May	Family living expenses	$ 1,000
	Machinery payment	
	Principal	4,000
	Interest	1,080

ASSIGNMENT SHEET #1

June	Machinery and truck hire	$ 7,936
	Cash rent	4,000
	Family living expenses	1,000
	Fuel, oil, and lubricants	434
	Machinery repair and maintenance	318
July	Machinery repair and maintenance	$ 1,242
	Family living expenses	1,000
	Fuel, oil, and lubricants	704
	Land payment	
	Principal	3,333
	Interest	5,333
August	Family living expenses	$ 1,000
	Fuel, oil, and lubricants	504
	Machinery repair and maintenance	437
September	Fertilizer	$ 5,600
	Wheat seed	2,176
	Family living expense	1,000
	Machinery hire	906
	Machinery repair and maintenance	804
	Fuel, oil, and lubricants	731
October	Family living expenses	$ 1,000
November	400# stocker steers	$62,620
	Feed	2,166
	Veterinary and medical supplies	1,600
	Family living expenses	1,000
	Truck hire	320
	Fuel, oil, and lubricants	91
	Machinery repair, and maintenance	49
	Building and fence repair	12
December	Family living expenses	$ 1,000
	Feed	774
	Taxes (real estate and personal property)	600
	Fuel, oil, and lubricants	91
	Machinery repair and maintenance	49
	Building and fence repair	12

You desire to keep a minimum beginning of the month cash balance of $500. Your annual interest rate on the operating loan is 10%. Calculate your projected cash flow for the 1978-79 crop year.

(NOTE: The data for this assignment sheet was taken from the Oklahoma State University Cooperative Extension Service Enterprise Budgets numbers #76200101 and #13200016 using Spring 1978 price vectors.)

FORM 26 CASH FLOW FINANCIAL PLAN OR SUMMARY

	LINE	JAN.	FEB.	MAR.	APR.	MAY	JUNE	SUBTOTAL
RECEIPTS								
Crop Sales	1							
	2							
	3							
	4							
Government Payments	5							
Custom Work	6							
Dividends, Refunds, Resales	7							
Cash Rent, Other Farm	8							
Livestock Products (add columns 9-10)	10							
Misc. Receipts (add columns 11-14)	14							
Non-Breeding Livestock Raised (add cols. 15-16)	16							
OPERATING SALES TOTAL	A							
Livestock Purchd. for Resale Sales Tot.(add cols.17-18)	18							
Breeding Livestock Sales (columns 19-21)	21							
Mach., Equip., Bldgs. Sold	22							
CAPITAL SALES TOTAL (add lines 21-22)	B							
TOTAL FARM RECEIPTS (line A plus 18 plus B)	C							
MONEY BORROWED summary only	23							
NON-FARM RECEIPTS	24							
TOTAL DOLLARS AVAILABLE (add lines C plus 23 plus 24)	D							
EXPENDITURES								
Hired Labor	25							
Repairs	26							
Interest	27							
Feed	28							
Seed, Plants	29							
Fertilizer, Lime, Chemicals	30							
Machine Hire	31							
Supplies	32							
Breeding Fees	33							
Misc. Expenses	34							
Vet. Medicine	35							
Fuel and Oil	36							
Storage	37							
Taxes	38							
Insurance	39							
Utilities	40							
Cash Rent Paid	41							
Freight-Trucking	42							
Conservation Expense	43							
OPERATING EXPEND. TOTAL (lines 25-43)	E							
Livestock Purchd. for Resale Tot. (add cols.43-44)	45							
Breeding Stock Purchases	46							
	47							
Mach. and Equip. Purchased	48							
Land and Bldg. Improvements	49							
CAPITAL EXPENSES TOTAL (lines 45-48)	F							
TOTAL FARM EXPENSES (line E plus 44 plus F)	G							
Principal Paid	50							
Non-Farm Exp. & Investments	51							
Family Living	FL							
TOTAL DOLLARS USED (lines G thru FL)	H							
Cash Difference for Month (D minus H)	I							
Cash Balance Beginning of Month (line I last month)	J							
Cash Balance End of Month (J ÷ I)	K							
		JAN.	FEB.	MAR.	APR.	MAY	JUNE	SUBTOTAL

ASSIGNMENT SHEET #1

FORM 26 CASH FLOW FINANCIAL PLAN OR SUMMARY

	LINE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
RECEIPTS								
Crop Sales	1							
	2							
	3							
	4							
Government Payments	5							
Custom Work	6							
Dividends, Refunds, Resales	7							
Cash Rent, Other Farm	8							
Livestock Products (add columns 9-10)	10							
Misc. Receipts (add columns 11-14)	14							
Non-Breeding Livestock Raised (add cols. 15-16)	16							
OPERATING SALES TOTAL	A							
Livestock Purchd. for Resale Sales Tot. (add cols.17-18)	18							
Breeding Livestock Sales (columns 19-21)	21							
Mach., Equip., Bldgs. Sold	22							
CAPITAL SALES TOTAL (add lines 21-22)	B							
TOTAL FARM RECEIPTS (line A plus 18 plus B)	C							
MONEY BORROWED summary only	23							
NON-FARM RECEIPTS	24							
TOTAL DOLLARS AVAILABLE (add lines C plus 23 plus 24)	D							
EXPENDITURES								
Hired Labor	25							
Repairs	26							
Interest	27							
Feed	28							
Seed, Plants	29							
Fertilizer, Lime, Chemicals	30							
Machine Hire	31							
Supplies	32							
Breeding Fees	33							
Misc. Expenses	34							
Vet. Medicine	35							
Fuel and Oil	36							
Storage	37							
Taxes	38							
Insurance	39							
Utilities	40							
Cash Rent Paid	41							
Freight-Trucking	42							
Conservation Expense	43							
OPERATING EXPEND. TOTAL (lines 25-43)	E							
Livestock Purchd. for Resale Tot. (add cols. 43-44)	45							
Breeding Stock Purchases	46							
	47							
Mach. and Equip. Purchased	48							
Land and Bldg. Improvements	49							
CAPITAL EXPENSES TOTAL (lines 45-48)	F							
TOTAL FARM EXPENSES (line E plus 44 plus F)	G							
Principal Paid	50							
Non-Farm Exp. & Investments	51							
Family Living	FL							
TOTAL DOLLARS USED (lines G thru FL)	H							
Cash Difference for Month (D minus H)	I							
Cash Balance Beginning of Month (line I last month)	J							
Cash Balance End of Month (J - I)	K							
		JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL

CASH FLOW
UNIT VII

ASSIGNMENT SHEET #2--DETERMINE IF YOU HAVE SUFFICIENT INFLOWS AND OUTFLOWS TO WARRANT COMPUTERIZED CASH FLOW

Most cooperators will use hand kept records in determining cash flow. However, some diversified cooperators will acquire a more detailed cash flow analysis. This type analysis is available from Oklahoma State University Cooperative Extension Service. The following pages (Figures 1-3), are examples of material you will need to complete if you decide to use computerized cash flow. Information to fill these out can be obtained from enterprise budgets, or your own personal records. Figures 4, 5, and 6 are computerized cash flows you will receive. These provide receipt and expenditure information for all months in question, plus labor analysis. The enterprise budgets following this are the budgets which were used in preparing the sample cash flow.

ASSIGNMENT SHEET #2

CASH FLOW ANALYSIS

Courtesy Okla. State Univ.
Cooperative Extension/Agric.
Economics Department

Oklahoma State University
Department of Agricultural Economics
Extension Farm Management

Title Cash Flow Projection for 1978
Name Workshop Example
Address North Central Oklahoma

A. Complete the following Cash and Loan Information:

Beginning Month (1=Jan., 2=Feb., etc.)	1
Beginning Cash Balance	$ 500.00
Beginning Operating Loan Balance	$ 75,000.00
Beginning Accrued Operating Loan Interest	$ 500.00
Minimum Beginning of Month Cash Balance	$ 500.00
Annual Interest Rate on Operating Loan	9.25%

B. Crop & Livestock Enterprise Plans

Crop Enterprise	Budget Identification Number	Number of Acres	Check if Change in Budget Required*
1. Wheat	7 6 2 0 0 1 0 1	800	
2. Wheat Grazing	8 9 2 0 0 8 0 1	200	
3. Alfalfa Hay	9 1 2 0 1 7 0 1	100	X
4.			
5.			
6.			

Livestock Enterprise	Budget Identification Number	Number of Head	Check if Change in Budget Required*
1. Stockers	1 3 2 0 0 1 5 3	350	X
2. Cow-calf	1 1 1 0 1 0 1 8	50	
3.			
4.			
5.			
6.			

*For each Budget to be changed complete Part (E) or attach copy of budget with changes marked.

C. The estimated hours and dollar amount of hired labor needed to operate the farm will be calculated for each month of the year. Complete the following labor information.

Hours of free family labor available each month.
(Default value is 200 hours per month).

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
200	200	200	240	240	240	240	240	240	240	200	200

ASSIGNMENT SHEET #2

Courtesy Okla. State Univ.
Cooperative Extension/Agricultural
Economics Department

D. The dollar amount and timing of receipts and expenses not included as receipts or operating costs on the enterprise budgets should be recorded below. Indicate the month(s) that the receipt or expense is expected to occur by number (Jan=1, Feb=2, etc.)

Non-Enterprise Receipts may include Government payments, patronage dividends, mineral royalties, machinery and equipment sales, and non-farm cash receipts.

Non-Enterprise Expenses may include building and fence repair, farm rent, property taxes, farm insurance premiums, machinery and equipment purchases, breeding livestock purchases, soil conservation expenses, principal and interest payments on long and intermediate term loans, family living expenses, and income taxes.

Non-Enterprise Receipts			Non-Enterprise Expenses		
Name	Month	Amount	Name	Month	Amount
Deficiency Payment	12	15,600.00	Rent	1 & 7	10,250.00
Miscellaneous Income	3	1,200.00	Property tax	12	2,200.00
			Farm Ins.	2 & 8	700.00
			Land Payment	6	6,111.00
			Land Payment	8	11,680.00
			Machinery Purc.	9	4,800.00
			Family Exp.	1 & 12	1,000.00
			Income Tax	2	3,200.00

ASSIGNMENT SHEET #2

Courtesy Okla. State Univ.
Cooperative Extension/Agricultural
Economics Department

E. BUDGET CHANGES

Fill in the blanks for only the items you want to change for each budget to be changed.

Budget Name: Alfalfa

Sell in barn.
Custom swath at $5/Ac.
No establishment costs. No storage costs.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Machinery Labor (Hours required)		.26			1.08	1.08	0	1.08	1.08			
Other or Livestock Labor (Hours required)					.25	.25		.25	.25			
Irrigation or Equipment Labor (Hours required)												
Total Receipts (Dollars)		80			0	0		0	0		80	80
Total Expenses (Dollars)	0	16.24		9.00	19.87	10.87	0	10.87	10.87	10.87		

Budget Identification Number 8 1 2 0 1 7 0 1 _ _ _ _ _ _ _ Number of Head or Acres 100

Budget Name: Stockers

No pasture cost.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Machinery Labor (Hours required)												
Other or Livestock Labor (Hours required)												
Irrigation or Equipment Labor (Hours required)												
Total Receipts (Dollars)												
Total Expenses (Dollars)	3.80	2.90	2.45	.56	5.95						196.50	2.90

Budget Identification Number 1 3 2 0 0 1 5 3 _ _ _ _ _ _ _ Number of Head or Acres 350

ASSIGNMENT SHEET #2

ENTERPRISE CASH FLOWS

CASH FLOW PROJECTION FOR 1978
WORKSHOP EXAMPLE
NORTH CENTRAL OKLAHOMA

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENTERPRISE RECEIPTS														
WHEAT	800.	0.	0.	0.	0.	0.	57600.	0.	0.	0.	0.	0.	0.	57600.
ALFALFA HAY	100.	0.	8000.	0.	0.	0.	0.	0.	0.	0.	0.	8000.	8000.	24000.
STOCKER-FEEDERS	350.	0.	0.	0.	0.	99998.	0.	0.	0.	0.	0.	0.	0.	99998.
COW-CALF	50.	399.	0.	532.	0.	0.	0.	0.	0.	280.	7838.	0.	0.	9049.
TOTAL		399.	8000.	532.	0.	99998.	57600.	0.	0.	280.	7838.	8000.	8000.	190647.
OTHER RECEIPTS														
DEFICIENCY PYMT		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	15600.	15600.
MISC INCOME		0.	0.	1200.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1200.
TOTAL		0.	0.	1200.	0.	0.	0.	0.	0.	0.	0.	0.	15600.	16800.
TOTAL CASH RECEIPTS		399.	8000.	1732.	0.	99998.	57600.	0.	0.	280.	7838.	8000.	23600.	207447.
ENTERPRISES EXPENSES														
WHEAT	800.	0.	9127.	0.	0.	0.	10783.	2189.	1075.	12585.	0.	0.	0.	35759.
GRAZING	200.	0.	1660.	122.	0.	0.	216.	547.	269.	3486.	0.	0.	0.	6300.
ALFALFA HAY	100.	0.	1624.	0.	900.	1987.	1087.	0.	1087.	1087.	0.	0.	0.	7772.
STOCKER-FEEDERS	350.	1330.	1015.	857.	196.	2082.	0.	0.	0.	0.	0.	68775.	1015.	75271.
COW-CALF	50.	432.	336.	458.	303.	630.	37.	37.	37.	37.	171.	227.	511.	3218.
TOTAL		1762.	13762.	1437.	1399.	4699.	12123.	2773.	2469.	17195.	171.	69002.	1526.	128319.
OTHER EXPENSES														
RENT		10250.	0.	0.	0.	0.	0.	10250.	0.	0.	0.	0.	0.	20500.
PROPERTY TAX		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	2200.	2200.
FARM INSURANCE		0.	700.	0.	0.	0.	0.	0.	700.	0.	0.	0.	0.	1400.
LAND PAYMENT		0.	0.	0.	0.	0.	6111.	0.	11680.	0.	0.	0.	0.	17791.
MACHINERY PURCH		0.	0.	0.	0.	0.	0.	0.	0.	4800.	0.	0.	0.	4800.
FAMILY EXPENSE		1000.	1000.	1000.	1000.	1000.	1000.	1000.	1000.	1000.	1000.	1000.	1000.	12000.
INCOME TAX		0.	3200.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	3200.
TOTAL		11250.	4900.	1000.	1000.	1000.	7111.	11250.	13380.	5800.	1000.	1000.	3200.	61891.
TOTAL CASH EXPENSES		13012.	18662.	2437.	2399.	5699.	19234.	14023.	15849.	22995.	1171.	70002.	4726.	190210.
500.00 MIN CASH BALANCE														
CASH BALANCE AT THE BEGINNING OF THE MONTH		500.	500.	500.	500.	500.	500.	24289.	8836.	500.	500.	500.	500.	
CASH DIFFERENCE BETWEEN RECEIPTS AND EXPENDITURES		-12613.	-10662.	-705.	-2399.	94299.	38366.	-14023.	-15849.	-22715.	6667.	-62002.	18874.	17237.
CASH POSITION AT THE END OF THE MONTH		-12113.	-10162.	-205.	-1899.	94799.	38866.	10265.	-7012.	-22215.	7167.	-61502.	19374.	

FBM I - 16

Courtesy Okla. State Univ. Cooperative Extension/Agricultural Economics Department

ASSIGNMENT SHEET #2

LABOR ANALYSIS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
MONTHLY TOTAL LABOR REQUIREMENTS (HOURS)													
MACHINERY LABOR	78.12	293.90	126.32	75.10	180.07	533.02	587.18	542.19	715.32	9.08	75.10	75.10	3290.51
OTHER LABOR	0.0	80.00	20.00	0.0	25.00	125.00	100.00	125.00	25.00	0.0	0.0	0.0	500.00
LIVESTOCK LABOR	136.50	165.00	166.50	115.00	120.00	14.50	14.50	7.50	13.50	13.00	198.50	136.50	1101.00
EQUIPMENT LABOR	25.72	25.72	25.72	25.72	25.72	14.72	14.72	14.72	14.72	14.72	25.72	25.72	253.61
TOTAL LABOR	240.34	564.62	338.54	215.82	350.79	687.24	716.40	689.41	768.53	36.79	299.32	237.32	5145.12
FREE OR FAMILY LABOR AVAILABLE BY MONTH	200.00	200.00	200.00	240.00	240.00	240.00	240.00	240.00	240.00	240.00	200.00	200.00	

FAMILY LABOR IS ALLOCATED FIRST TO LIVESTOCK THEN TO MACHINERY THEN TO EQUIPMENT THEN TO OTHER AND LASTLY TO IRRIGATION

AFTER FREE LABOR IS DEDUCTED THE FOLLOWING CHARGES FOR LABOR ARE MADE

MACH. AT 3.00 PER HR	121.03	881.70	378.97	0.0	332.38	1341.73	1429.19	1348.24	1585.61	0.0	225.30	111.95	7756.08
LVSTK AT 3.00 PER HR	0.0	135.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	135.00
EQUIP AT 3.00 PER HR	0.0	77.15	36.65	0.0	0.0	0.0	0.0	0.0	0.0	0.0	72.65	0.0	186.46
TOTAL LABOR COST	121.03	1093.85	415.63	0.0	332.38	1341.73	1429.19	1348.24	1585.61	0.0	297.95	111.95	8077.54

CASH FLOW SUMMARY

CASH POSITION AT END OF MONTH LABOR DEDUCTED	-12235.	-11256.	-621.	-1899.	94466.	37524.	8836.	-8361.	-23801.	7167.	-61800.	19262.	
MONEY BORROWED IN MONTH	12735.	11756.	1121.	2399.	0.	0.	0.	8861.	24301.	0.	62300.	0.	
PAYMENTS ON LOAN	0.	0.	0.	0.	89875.	13134.	0.	0.	0.	6343.	0.	17868.	
500.00 JAN 1 INT. DUE													
INTEREST PAID AT 9.25%	0.	0.	0.	0.	4091.	101.	0.	0.	0.	324.	0.	894.	
CASH BALANCE-ENDING	500.	500.	500.	500.	500.	24289.	8836.	500.	500.	500.	500.	500.	
											INTEREST DUE END OF DEC		0.0
75000.00 LOANS OUTSTANDING ON JAN 1													
ACCUMULATED BORROWING END OF MONTH	87735.	99491.	100611.	103010.	13134.	0.	0.	8861.	33162.	26818.	89118.	71250.	

Courtesy Okla. State Univ. Cooperative Extension/Agricultural Economics Department

ASSIGNMENT SHEET #2

ITEMIZED CASH FLOW SUMMARY

01/16/78

CASH FLOW PROJECTION FOR 1978
WORKSHOP EXAMPLE
NORTH CENTRAL OKLAHOMA

	ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
	OPERATING RECEIPTS														
	LIVESTOCK														
1	STRS (5-7) CH	350.0	0.	0.	0.	0.	106975.	0.	0.	0.	0.	0.	0.	0.	106975.
10	STR CALV(3-5) CH	50.0	427.	0.	570.	0.	0.	0.	0.	0.	296.	8379.	0.	0.	9673.
	CROPS														
3	ALFALFA HAY	100.0	0.	7332.	0.	0.	0.	0.	0.	0.	0.	0.	7315.	7315.	21961.
38	WHEAT	800.0	0.	0.	0.	0.	0.	64000.	0.	0.	0.	0.	0.	0.	64000.
6	DEF PAYMENT		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	15600.	15600.
7	MISC INCOME		0.	0.	1200.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1200.
8	TOTAL OPER. RECEIPTS		427.	7332.	1770.	0.	106975.	64000.	0.	0.	296.	8379.	7315.	22915.	219409.
	CAPITAL SALES AND OTHER INCOME														
13	TOTAL CASH INFLOWS		427.	7332.	1770.	0.	106975.	64000.	0.	0.	296.	8379.	7315.	22915.	219409.
	OPERATING EXPENSE														
14	FEEDER LIVESTOCK PURC.		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	68600.	0.	68600.
15	LABOR HIRED		91.	828.	338.	0.	169.	833.	512.	586.	484.	0.	274.	88.	4205.
16	MACH & EQUIP REPAIRS		66.	304.	118.	62.	256.	696.	1945.	882.	1455.	9.	62.	62.	5915.
17	BUILDING & FENCE REPAIR		28.	28.	28.	28.	28.	19.	19.	19.	19.	19.	28.	28.	289.
18	RENT AND LEASES		10250.	0.	0.	0.	0.	0.	10250.	0.	0.	0.	0.	0.	20500.
19	FEED PURCHASED		1478.	1138.	1031.	310.	32.	6.	6.	6.	6.	6.	2551.	1163.	7733.
20	SEED PURCHASED		0.	0.	0.	0.	0.	0.	0.	0.	3720.	0.	0.	0.	3720.
21	FERTILIZER AND LIME		0.	7140.	0.	0.	0.	0.	0.	0.	8750.	0.	0.	0.	15890.
22	CHEMICALS		0.	2000.	0.	900.	900.	0.	0.	0.	0.	0.	0.	0.	3800.
23	MACHINE HIRE		2000.	1650.	0.	0.	500.	10420.	0.	500.	2000.	0.	0.	0.	17070.
24	LVSTK EXPIVET,PED,SUPL)		0.	0.	0.	0.	224.	0.	0.	0.	0.	0.	1400.	0.	1624.
25	FUEL, OIL, LUBRICANTS		113.	476.	192.	109.	242.	809.	1084.	915.	1262.	13.	109.	109.	5434.
26	TAXES(R.E. & PERS PROP)		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	2350.	2350.
27	INSURANCE		0.	700.	0.	0.	0.	0.	0.	700.	0.	0.	0.	0.	1400.
29	FREIGHT, TRUCKING		63.	0.	63.	0.	684.	0.	0.	0.	0.	125.	438.	0.	1372.
31	OTHR FARM OPERATING EXP		0.	0.	0.	0.	1525.	300.	0.	300.	300.	0.	0.	0.	2425.
33	TOTAL OPERATING EXPENSE		14090.	14265.	1770.	1409.	4561.	13082.	13815.	3907.	17994.	170.	73662.	3801.	162325.
	CAPITAL AND OTHER EXPENSE														
34	BREEDING LIVESTOCK		0.	0.	0.	0.	384.	0.	0.	0.	0.	0.	0.	0.	384.
35	MACHINERY & EQUIPMENT		0.	0.	0.	0.	0.	0.	0.	0.	4800.	0.	0.	0.	4800.
37	TOTAL CAPITAL EXPENSE		0.	0.	0.	0.	384.	0.	0.	0.	4800.	0.	0.	0.	5184.
38	FAM LIVING, INC TAX,ETC		1000.	4200.	1000.	1000.	1000.	1000.	1000.	1000.	1000.	1000.	1000.	1000.	15200.
39	PRIN. PAYMENTS ON DEBT		0.	0.	0.	0.	0.	2911.	0.	1690.	0.	0.	0.	0.	4601.
40	INT. PAYMENTS ON DEBT		0.	0.	0.	0.	0.	3200.	0.	9990.	0.	0.	0.	0.	13190.
41	TOTAL CASH OUTFLOWS		15090.	18465.	2770.	2409.	5945.	20193.	14815.	16587.	23794.	1170.	74462.	4801.	200500.
	CASH FLOW SUMMARY														ANNUAL
42	BEGINNING CASH BALANCE		500.	500.	500.	500.	500.	500.	36941.	22127.	5540.	500.	500.	500.	500.
43	CASH DIFFERENCE		-14662.	-11133.	-1000.	-2409.	101030.	43807.	-14815.	-16587.	-23498.	7209.	-67147.	18114.	18908.
44	CASH POSITION		-14162.	-10633.	-500.	-1909.	101530.	44307.	22127.	5540.	-17958.	7709.	-66647.	18614.	19408.
45	MONEY BORROWED THIS PER		14662.	11133.	1000.	2409.	0.	0.	0.	0.	18458.	0.	67147.	0.	114810.
46	PRIN.PAY.ON OPERAT.LOAN		0.	0.	0.	0.	96896.	7309.	0.	0.	0.	7067.	0.	17421.	128692.
47	INT. PAY.ON OPERAT.LOAN		0.	0.	0.	0.	4134.	56.	0.	0.	0.	142.	0.	693.	5026.
48	ENDING CASH BALANCE		500.	500.	500.	500.	500.	36941.	22127.	5540.	500.	500.	500.	500.	500.
49	ACCMULATED BORROWING		89662.	100795.	101795.	104205.	7309.	0.	0.	0.	18458.	11392.	78539.	61118.	0.

BEGINING LOAN 75000.00 BEGIN ING INTEREST DUE 500.00 INTEREST RATE 0.09 ENDING INTEREST DUE 0.0

Courtesy Okla. State Univ. Cooperative Extension/Agricultural Economics Department

FBM 1963

ASSIGNMENT SHEET #2

COW-CALF COSTS & RETURNS PER COW
100 COW UNIT SIZE, SPRING CALVING
NATIVE PASTURE

11101018
01/17/78
NORTHWEST

LIVESTOCK INVESTMENT	UNITS	SIZE	NUMBER	VALUE/UNIT	VALUE	YOUR VALUE
BEEF COW	CWT.	9.50	1.00	350.000	350.00	
BEEF BULL	CWT.	16.00	0.03	750.000	22.50	
BEEF HEIFER	CWT.	8.00	0.12	275.000	33.00	
HORSE	HD.	1.00	0.01	200.000	2.00	
TOTAL LIVESTOCK INVESTMENT					407.50	

PRODUCTION	UNITS	QUANTITY	WEIGHT	PRICE	VALUE/UNIT	VALUE	YOUR VALUE
STR CALV(3-5) CH	CWT.	0.44	4.60	49.000	225.40	99.18	
HFR CALV(3-5) CH	CWT.	0.32	4.35	43.000	187.05	59.86	
COWS-COMMERCIAL	CWT.	0.10	9.50	30.000	285.00	28.50	
AGFC BULL	CWT.	0.01	16.00	37.000	592.00	5.92	
TOTAL RECEIPTS						193.45	

OPERATING INPUTS	UNITS	RATE PER UNIT	NUMBER OF UNITS	TOTAL UNITS	PRICE	VALUE	
PROTEIN SUPPLE.	LBS.	302.00	1.12	338.240	0.07	25.37	
PRAIRIE HAY	TONS	0.16	1.12	0.179	45.00	8.06	
SALT & MIN.	LBS.	24.00	1.12	26.880	0.05	1.34	
VET & MED.	HD.	1.00	1.12	1.120	4.00	4.48	
HAULING & MKTG.	HD.	1.00	1.00	1.000	5.00	5.00	
PERSONAL TAXES	HD.	1.00	1.00	1.000	3.00	3.00	
BULLS, HERD	HD.	0.01	1.00	0.010	750.00	7.50	
TRACTOR FUEL & LUBE						3.42	
TRACTOR REPAIR COST						1.73	
MACHINERY REPAIR COST						0.16	
EQUIPMENT REPAIR						1.58	
TOTAL OPERATING COST						61.65	

RETURNS TO LAND, LABOR, CAPITAL, MACHINERY, OVERHEAD, RISK AND MANAGEMENT	131.81

CAPITAL COST	PRICE	AMOUNT	VALUE	YOUR VALUE
ANNUAL OPERATING CAPITAL	0.095	23.072	2.19	
TRACTOR INVESTMENT	0.095	14.156	1.34	
MACHINERY INVESTMENT	0.095	0.121	0.01	
EQUIPMENT INVESTMENT	0.095	22.050	2.09	
LIVESTOCK INVESTMENT	0.095	407.500	38.71	
TOTAL INTEREST CHARGE			44.36	

RETURNS TO LAND, LABOR, MACHINERY, OVERHEAD, RISK AND MANAGEMENT	87.45

OWNERSHIP COST: (DEPRECIATION, TAXES, INSURANCE)		
TRACTOR	DOL.	2.55
MACHINERY	DOL.	0.02
EQUIPMENT	DOL.	3.32
LIVESTOCK	DOL.	0.50
TOTAL OWNERSHIP COST		6.39

RETURNS TO LAND, LABOR, OVERHEAD, RISK AND MANAGEMENT	81.06

LABOR COSTS	PRICE	HOURS	
MACHINERY LABOR	3.000	2.420	7.26
EQUIPMENT LABOR	3.000	3.532	10.60
LIVESTOCK LABOR	3.000	5.920	17.76
TOTAL LABOR COST		11.872	35.62

RETURNS TO LAND, OVERHEAD, RISK AND MANAGEMENT	45.44

PASTURE CHARGES	UNITS	TOTAL UNITS	PRICE	
NATIVE PASTURE	AUMS	12.00	0.0	0.0
PASTURE INVESTMENT	DOL.	0.0	0.0	0.0
PASTURE TAXES				0.0
TOTAL PASTURE CHARGES				0.0

RETURNS TO OVERHEAD, RISK AND MANAGEMENT	45.44

RANGE, CAKE, HAY IN BAD WEATHER
88% CALF CROP

CHILDS

ASSIGNMENT SHEET #2

100 HEAD STOCKER STEERS - PER HEAD
STARTING WEIGHT - 400#
SMALL GRAIN GRAZEOUT

13200153
08/26/77
NORTHCENTRAL

PRODUCTION	UNITS	QUANITY	WEIGHT	PRICE	VALUE/UNIT	VALUE	YOUR VALUE
STRS (5-7) CH	CWT.	0.98	6.78	43.000	291.54	285.71	
TOTAL RECEIPTS						285.71	

OPERATING INPUTS	UNITS	RATE PER UNIT	NUMBER OF UNITS	TOTAL UNITS	PRICE	VALUE	YOUR VALUE
STR CALVES(3-5) CH	CWT.	1.00	4.00	4.000	46.00	184.00	
S.G. PASTURE	AUMS	3.11	1.00	3.110	13.00	40.43	
PRAIRIE HAY	TONS	0.15	1.00	0.150	45.00	6.75	
SALT & MIN.	LBS.	16.25	1.00	16.250	0.06	0.96	
41-45% PRO. SUP.	LBS.	50.00	1.00	50.000	0.10	4.95	
STARTER FEED	CWT.	0.60	1.00	0.600	8.00	4.80	
NATIVE PASTURE	AUMS	0.50	1.00	0.500	5.00	2.50	
VET & MED.	HD.	1.00	1.00	1.000	4.00	4.00	
TRUCKING	CWT.	12.82	1.00	12.820	0.25	3.20	
SALES COMM.	HD.	1.00	1.00	1.000	3.50	3.50	
MACH. FUEL & LUBE						1.81	
MACHINERY REPAIR COST						0.67	
EQUIPMENT FUEL AND LUBE						0.25	
EQUIPMENT REPAIR						0.19	
TOTAL OPERATING COST						258.01	
RETURNS TO LAND, LABOR, CAPITAL, MACHINERY, OVERHEAD, RISK, AND MANAGEMENT						27.70	

CAPITAL COST	PRICE	AMOUNT	VALUE	YOUR VALUE
ANNUAL OPERATING CAPITAL	0.095	112.414	10.68	
MACHINERY INVESTMENT	0.095	5.208	0.49	
EQUIPMENT INVESTMENT	0.095	4.462	0.42	
TOTAL INTEREST CHARGE			11.60	
RETURNS TO LAND, LABOR, MACHINERY, OVERHEAD, RISK AND MANAGEMENT			16.10	

OWNERSHIP COST: (DEPRECIATION, TAXES, INSURANCE)			
MACHINERY	DOL.	0.91	
EQUIPMENT	DOL.	0.96	
TOTAL OWNERSHIP COST		1.88	
RETURNS TO LAND, LABOR, OVERHEAD, RISK AND MANAGEMENT		14.22	

LABOR COSTS	PRICE	HOURS		
MACHINERY LABOR	3.000	1.260	3.78	
EQUIPMENT LABOR	3.000	0.220	0.66	
LIVESTOCK LABOR	3.000	2.300	6.90	
TOTAL LABOR COST		3.780	11.34	
RETURNS TO LAND, OVERHEAD RISK AND MANAGEMENT			2.88	

BUY 400# STEER NOV. 15 - SELL MAY 15 (2% DEATH LOSS)
GAINS 1.35#/DAY TO MARCH 15
GAINS 1.85#/DAY TO MAY 15

SHARKEY

09/13/77 0100000000

ENTERPRISE 13 AREA AND COUNTY 20 DETAIL 31 SPECIES 5 AGE & SEX 3
GRACE 1 MACH. COMP. 12 IND. NUMBER 1 PRICE VECT 2 EQUIP. COMP 12
ANNUAL CAPITAL MONTHS 5

Courtesy Okla. State Univ. Cooperative Extension/Agricultural Economics Department

ASSIGNMENT SHEET #2

WHEAT FOR GRAIN
SMALL GRAIN CLAY AND LOAM SOILS
USUALLY USE CLASSES I & II

76200101
08/26/77
NORTHCENTRAL

CATEGORY	UNITS	PRICE	QUANTITY	VALUE	YOUR VALUE
PRODUCTION:					
WHEAT	BU.	2.250	32.000	72.00	
GRAZING	AUMS	0.0	0.750	0.0	
TOTAL RECEIPTS				72.00	
OPERATING INPUTS:					
WHEAT SEED	BU.	3.300	1.000	3.30	
18-46-0 FERT	CWT.	8.750	1.000	8.75	
NITROGEN (N)	LBS.	0.170	40.000	6.80	
INSECTICIDE	ACRE	2.500	1.000	2.50	
CUSTOM COMBINE	ACRE	9.200	1.000	9.20	
CUSTOM HAULING	BU.	0.100	32.000	3.20	
FERT. SPREADER	ACRE	1.500	2.000	3.00	
TRACTOR FUEL & LUBE	ACRE			3.03	
TRACTOR REPAIR COST	ACRE			1.74	
EQUIP. FUEL & LUBE	ACRE			1.03	
EQUIP. REPAIR COST	ACRE			2.14	
TOTAL OPERATING COST				44.70	
RETURNS TO LAND, LABOR, CAPITAL, MACHINERY, OVERHEAD, RISK, AND MANAGEMENT				27.30	
CAPITAL COST:					
ANNUAL OPERATING CAPITAL		0.095	19.229	1.83	
TRACTOR INVESTMENT		0.095	28.530	2.71	
EQUIPMENT INVESTMENT		0.095	15.206	1.44	
TOTAL INTEREST CHARGE				5.98	
RETURNS TO LAND, LABOR, MACHINERY, OVERHEAD, RISK AND MANAGEMENT				21.32	
OWNERSHIP COST: (DEPRECIATION, TAXES, INSURANCE)					
TRACTOR	DR.			3.72	
EQUIPMENT	DR.			2.42	
TOTAL OWNERSHIP COST				6.13	
RETURNS TO LAND, LABOR, OVERHEAD, RISK AND MANAGEMENT				15.19	
LABOR COST:					
MACHINERY LABOR	HR.	3.000	2.271	6.81	
OTHER LABOR	HR.	3.000	0.400	1.20	
TOTAL LABOR COST			2.671	8.01	
RETURNS TO LAND, OVERHEAD, RISK AND MANAGEMENT				7.17	

100# 18-46-0 FALL
40# NITROGEN SPRING
CUSTOM COMBINE & TRUCKING

SHARKEY
09/03/77
0100000000

ENTERPRISE 26 AREA AND COUNTY 20 DETAIL 51 IRIG. LEVEL 0 LAND CLASS 1
GRAZING 5 MACH. COMP. 12 IRIG. SYSTEM 3 PRICE VECT 2 INDIV. NUMBER 12
ANNUAL CAPITAL MONTH: 6

Courtesy Okla. State Univ. Cooperative Extension/Agricultural Economics Department

ASSIGNMENT SHEET #2

ALFALFA HAY - 4 TONS - 4 CUTTINGS
CLASS 1 - BOTTOMLAND
OWNED EQUIPMENT

81201701
01/11/78
NORTHCENTRAL

CATEGORY	UNITS	PRICE	QUANTITY	VALUE	YOUR VALU
PRODUCTION:					
ALFALFA	TONS	55.000	4.000	220.00	
GRAZING	AUMS	0.0	0.200	0.0	
TOTAL RECEIPTS				220.00	
OPERATING INPUTS:					
ALFALFA SEED	LBS.	1.400	4.000	5.60	
LIME	TONS	7.650	0.400	3.06	
PHOSPH (P2O5)	LBS.	0.120	72.000	8.64	
POTASH (K2O)	LBS.	0.070	72.000	5.04	
INSECTICIDE	ACRE	9.000	2.000	18.00	
FERT. SPREADER	ACRE	1.500	1.200	1.80	
STORAGE	TONS	3.000	4.000	12.00	
WIRE	TONS	3.000	4.000	12.00	
TRACTOR FUEL & LUBE	ACRE			3.17	
TRACTOR REPAIR COST	ACRE			2.02	
EQUIP. FUEL & LUBE	ACRE			5.05	
EQUIP. REPAIR COST	ACRE			7.60	
TOTAL OPERATING COST				83.98	
RETURNS TO LAND,LABOR,CAPITAL,MACHINERY, OVERHEAD,RISK,AND MANAGEMENT				136.02	
CAPITAL COST:					
ANNUAL OPERATING CAPITAL		0.090	5.373	0.48	
TRACTOR INVESTMENT		0.090	29.676	2.67	
EQUIPMENT INVESTMENT		0.090	112.489	10.12	
TOTAL INTEREST CHARGE				13.28	
RETURNS TO LAND, LABOR, MACHINERY, OVERHEAD, RISK AND MANAGEMENT				122.74	
OWNERSHIP COST: (DEPRECIATION, TAXES, INSURANCE)					
TRACTOR	HR.			3.55	
EQUIPMENT	HR.			19.30	
TOTAL OWNERSHIP COST				22.84	
RETURNS TO LAND, LABOR, OVERHEAD, RISK AND MANAGEMENT				99.90	
LABOR COST:					
MACHINERY LABOR	HR.	3.000	4.775	14.32	
OTHER LABOR	HR.	3.000	1.000	3.00	
TOTAL LABOR COST			5.775	17.32	
RETURNS TO LAND, OVERHEAD, RISK AND MANAGEMENT				82.57	
LAND CHARGE OR RENT:					
LAND INVESTMENT	ACRE	0.0	0.0	0.0	
LAND TAXES	ACRE			0.0	
TOTAL LAND CHARGE				0.0	
RETURNS TO OVERHEAD, RISK AND MANAGEMENT				82.57	

HAY SOLD OUT OF BARN
OWNED HAY EQUIPMENT

SHARKEY

01/20/78

0100000000

Courtesy Okla. State Univ. Cooperative Extension/Agricultural Economics Department

ASSIGNMENT SHEET #2

SMALL GRAIN GRAZEOUT
SMALL GRAIN CLAY AND LOAM SOILS
USUALLY USE CLASSES I & II

89200901
08/26/77
NORTHCENTRAL

CATEGORY	UNITS	PRICE	QUANTITY	VALUE	YOUR VALUE
PRODUCTION:					
GRAZING	AUMS	0.0	2.750	0.0	
TOTAL RECEIPTS				0.0	
OPERATING INPUTS:					
GRAIN SEED	BU.	5.000	1.000	5.00	
18-46-0 FERT	CWT.	8.750	1.000	8.75	
NITROGEN (N)	LBS.	0.170	40.000	6.80	
FERT. SPREADER	ACRE	1.50C	2.000	3.00	
TRACTOR FUEL & LUBE	ACRE			3.03	
TRACTOR REPAIR COST	ACRE			1.74	
EQUIP. FUEL & LUBE	ACRE			1.03	
EQUIP. REPAIR COST	ACRE			2.14	
TOTAL OPERATING COST				31.50	
RETURNS TO LAND,LABOR,CAPITAL,MACHINERY, OVERHEAD,RISK,AND MANAGEMENT				-31.50	
CAPITAL COST:					
ANNUAL OPERATING CAPITAL		0.095	15.449	1.47	
TRACTOR INVESTMENT		0.095	28.530	2.71	
EQUIPMENT INVESTMENT		0.095	15.206	1.44	
TOTAL INTEREST CHARGE				5.62	
RETURNS TO LAND, LABOR, MACHINERY, OVERHEAD, RISK AND MANAGEMENT				-37.12	
OWNERSHIP COST: (DEPRECIATION, TAXES, INSURANCE)					
TRACTOR	HR.			3.72	
EQUIPMENT	HR.			2.42	
TOTAL OWNERSHIP COST				6.13	
RETURNS TO LAND, LABOR, OVERHEAD, RISK AND MANAGEMENT				-43.26	
LABOR COST:					
MACHINERY LABOR	HR.	3.000	2.271	6.81	
OTHER LABOR	HR.	3.000	0.400	1.20	
TOTAL LABOR COST			2.671	8.01	
RETURNS TO LAND, OVERHEAD, RISK AND MANAGEMENT				-51.27	

100# 18-46-0 FALL
40# NITROGEN SPRING

SHARKEY

09/03/77 01000000000

ENTERPRISE 89 AREA AND COUNTY 22 DETAIL 25 IRIG. LEVEL 0 LAND CLASS 1
GRAZING 5 MACH. COMP. 12 IRIG. SYSTEM 0 PRICE VECT 2 INDIV. NUMBER 12
ANNUAL CAPITAL MONTH: 4

Courtesy Okla. State Univ. Cooperative Extension/Agricultural Economics Department

CASH FLOW
UNIT VII

ASSIGNMENT SHEET #3--ESTIMATE FAMILY LIVING EXPENDITURES

The best guideline to help an individual family estimate their own living expenditures is a historical record. The family living section in the *Oklahoma Young Farmer Record Book* may prove to be an excellent source of historical data if kept completely and accurately. Family living costs normally change from year-to-year. Factors which normally affect family living costs include:

1. Stage in the family life cycle

   Example: Those families with high school or college-age children have the highest relative family living expenditures

2. Family living expenditures rise with net income

3. The larger the family, the greater the family living expenditures

4. Increases in the cost of living

Use the following estimate sheet to determine your families expenditures for the next year.

ASSIGNMENT SHEET #3

ESTIMATING FAMILY LIVING EXPENDITURES

FAMILY LIVING EXPENDITURES	EXPEND. LAST YEAR	CURRENT EST.EXPEND.
1. Food		
2. Clothing		
3. Household Operating Expenses		
4. Telephone & Electricity		
5. Rent		
6. Non-Farm Interest & Principal Payments		
7. Life Insurance, Non-Medical, Non-Farm		
8. Health and Accident Insurance		
9. Doctors & Dentists		
10. Prescription Drugs & Medicines		
11. Household Equipment, Furnishings, & Improvements		
12. Personal Items		
13. Entertainment, Recreation, Gifts, Tax Deductible Contributions		
14. Education and Reading		
15. Personal Car & Travel, H. S.		
16. Gifts		
17. Church & Charity		
18. Taxes		
TOTAL EXPENDITURES ALLOCATED OVER THE MONTHS		

ASSIGNMENT SHEET #3

ESTIMATING FAMILY LIVING EXPENDITURES

FAMILY LIVING EXPENDITURES	EXPEND. LAST YEAR	CURRENT EST.EXPEND.
1. Food		
2. Clothing		
3. Household Operating Expenses		
4. Telephone & Electricity		
5. Rent		
6. Non-Farm Interest & Principal Payments		
7. Life Insurance, Non-Medical, Non-Farm		
8. Health and Accident Insurance		
9. Doctors & Dentists		
10. Prescription Drugs & Medicines		
11. Household Equipment, Furnishings, & Improvements		
12. Personal Items		
13. Entertainment, Recreation, Gifts, Tax Deductible Contributions		
14. Education and Reading		
15. Personal Car & Travel, H. S.		
16. Gifts		
17. Church & Charity		
18. Taxes		
TOTAL EXPENDITURES ALLOCATED OVER THE MONTHS		

CASH FLOW
UNIT VII

ANSWERS TO ASSIGNMENT SHEET #1

See following pages.

174 FORM 26 CASH FLOW

ASSIGNMENT SHEET #1

FINANCIAL PLAN OR SUMMARY

	LINE	JAN.	FEB.	MAR.	APR.	MAY	JUNE	SUBTOTAL
RECEIPTS								
Crop Sales	1						51200	51200
	2							
	3							
	4							
Government Payments	5							
Custom Work	6							
Dividends, Refunds, Resales	7							
Cash Rent, Other Farm	8							
Livestock Products (add columns 9-10)	10							
Misc. Receipts (add columns 11-14)	14							
Non-Breeding Livestock Raised (add cols. 15-16)	16							
OPERATING SALES TOTAL	A						51200	51200
Livestock Purchd. for Resale Sales Tot. (add cols 17-18)	18			81505				
Breeding Livestock Sales (columns 19-21)	21							
Mach., Equip., Bldgs. Sold	22							
CAPITAL SALES TOTAL (add lines 21-22)	B							
TOTAL FARM RECEIPTS (line A plus 18 plus B)	C							
MONEY BORROWED summary only	23							
NON-FARM RECEIPTS	24							
TOTAL DOLLARS AVAILABLE (add lines C plus 23 plus 24)	D			81505			51200	132705
EXPENDITURES								
Hired Labor	25							
Repairs	26	49	214	49			318	630
Interest	27					1080		1080
Feed	28	1062	774	459				2295
Seed, Plants	29							
Fertilizer, Lime, Chemicals	30		5440					5440
Machine Hire	31		960	440			7936	9336
Supplies	32	91	349	91			434	965
Breeding Fees	33							
Misc. Expenses	34	12	12	1132				1156
Vet. Medicine	35							
Fuel and Oil	36							
Storage	37							
Taxes	38							
Insurance	39							
Utilities	40							
Cash Rent Paid	41						4000	4000
Freight-Trucking	42							
Conservation Expense	43							
OPERATING EXPEND. TOTAL (lines 25-43)	E	1214	7749	2171		1080	12688	24902
Livestock Purchd. for Resale Tot. (add cols 43-44)	45							
Breeding Stock Purchases	46							
	47							
Mach. and Equip. Purchased	48							
Land and Bldg. Improvements	49							
CAPITAL EXPENSES TOTAL (lines 45-48)	F							
TOTAL FARM EXPENSES (line E plus 44 plus F)	G	1214	7749	2171		1080	12688	24902
Principal Paid	50					4000		4000
Non-Farm Exp. & Investments	51							
Family Living	FL	1000	2200	1000	1000	1000	1000	7200
TOTAL DOLLARS USED (lines G thru FL)	H	2214	9949	3171	1000	6080	13688	36102
Cash Difference for Month (D minus H)	I	-2214	-9949	78334	-1000	-6080	37512	96603
Cash Balance Beginning of Month (line I last month)	J	500	500	500	500	500	500	500
Cash Balance End of Month (J + I)	K	-1714	-9449	77834	-500	-5580	37012	
		JAN.	FEB.	MAR.	APR.	MAY	JUNE	SUBTOTAL

FORM 26 CASH FLOW FINANCIAL PLAN OR SUMMARY

	LINE	JULY	AUG	SEP	OCT	NOV	DEC	TOTAL
RECEIPTS								
Crop Sales	1							51200
	2							
	3							
	4							
Government Payments	5							
Custom Work	6							
Dividends, Refunds, Resales	7							
Cash Rent, Other Farm	8							81505
Livestock Products (add columns 9-10)	10							
Misc. Receipts (add columns 11-14)	14							
Non-Breeding Livestock Raised (add cols. 15-16)	16							
OPERATING SALES TOTAL	A							132705
Livestock Purchd. for Resale Sales Tot (add cols 17-18)	18							
Breeding Livestock Sales (columns 19-21)	21							
Mach., Equip., Bldgs. Sold	22							
CAPITAL SALES TOTAL (add lines 21-22)	B							
TOTAL FARM RECEIPTS (line A plus 18 plus B)	C							
MONEY BORROWED summary only	23							
NON-FARM RECEIPTS	24							
TOTAL DOLLARS AVAILABLE (add lines C plus 23 plus 24)	D							132705
EXPENDITURES								
Hired Labor	25							
Repairs	26	1242	437	804		49	49	3211
Interest	27	5333						6413
Feed	28					2166	774	5235
Seed, Plants	29			2176				2176
Fertilizer, Lime, Chemicals	30			5600				11040
Machine Hire	31			960		320		10616
Supplies	32	704	504	731		91	91	3086
Breeding Fees	33							
Misc. Expenses	34					12	12	1180
Vet. Medicine	35					1600		1600
Fuel and Oil	36							
Storage	37							
Taxes	38						600	600
Insurance	39							
Utilities	40							
Cash Rent Paid	41							4000
Freight Trucking	42							
Conservation Expense	43							
OPERATING EXPEND. TOTAL (lines 25-43)	E	7279	941	10271		4238	1526	49157
Livestock Purchd. for Resale Tot. (add cols. 43-44)	45					62720		
Breeding Stock Purchases	46							
	47							
Mach. and Equip. Purchased	48							
Land and Bldg. Improvements	49							
CAPITAL EXPENSES TOTAL (lines 45-48)	F					62720		62720
TOTAL FARM EXPENSES (line E plus 44 plus F)	G	7279	941	10271		66958	1526	111877
Principal Paid	50	3333						7333
Non-Farm Exp. & Investments	51							
Family Living	FL	1000	1000	1000	1000	1000	1000	13200
TOTAL DOLLARS USED (lines G thru FL)	H	11612	1941	11271	1000	67958	2526	132410
Cash Difference for Month (D minus H)	I	-11612	-1941	-11271	-1000	-67958	-2526	295
Cash Balance Beginning of Month (line I last month)	J	500	500	500	500	500	500	500
Cash Balance End of Month (J + I)	K	-11112	-1441	-10771	-500	-67458	-2026	
		JULY	AUG	SEP	OCT	NOV	DEC	TOTAL

FARM CREDIT
UNIT VIII

UNIT OBJECTIVE

After completion of this unit, the cooperator should be able to discuss the role of credit in farming, as well as classifications and sources of credit. The cooperator should also be able to compute interest and loan payments. This knowledge will be evidenced through demonstration and completion of assignment sheets.

SPECIFIC OBJECTIVES

After completion of this unit, the cooperator should be able to:

1. Match terms associated with farm credit to the correct definitions.
2. Describe in a short paragraph the role of credit in farming.
3. Discuss the three R's of credit management.
4. Discuss stages of the farm business life cycle.
5. Select from a list sound credit principles.
6. Explain the classification of credit.
7. Identify sources of credit.
8. Compare methods of computing interest.
9. Discuss factors that affect cost of credit.
10. Compute interest expense.
11. Calculate the cost of credit.
12. Compare financing methods.

FARM CREDIT
UNIT VIII

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

A. Provide cooperator with objective sheet.

B. Provide cooperator with information and assignment sheets.

C. Make transparencies.

D. Discuss unit and specific objectives.

E. Discuss information and assignment sheets.

II. Instructional materials:

A. Objective sheets

B. Information sheets

C. Assignment sheets

1. Assignment Sheet #1--Compute Interest Expense

2. Assignment Sheet #2--Calculate the Cost of Credit

3. Assignment Sheet #3--Comparison of Financing Methods

D. Answers to assignment sheets

III. Unit references:

A. Schneeberger, Kenneth C., and Osburn, Donald D. *Financial Planning in Agriculture*. Danville, Illinois: The Interstate Printers and Publishers, Inc., 1977.

B. Walrath, Arthur J. *Evaluation of Investment Opportunities: Tools for Decisionmaking in Farming and Other Businesses*. rev. Washington, D.C.: U.S. Department of Agriculture Economic Research Service in Cooperation with College of Agriculture and Life Sciences, Virginia Polytechnic Institute and State University, Agriculture Handbook No. 349, 1977.

C. Tweeten, Luther G. *Foundations of Farm Policy*. Lincoln, Nebraska: University of Nebraska Press, 1970.

D. Hopkin, John A., and Barry, Peter J., and Baker, C. B. *Financial Management in Agriculture*. Danville, Illinois: The Interstate Printers and Publishers, Inc., 1973.

E. James, Sydney C., and Stoneberg, Everett. *Farm Accounting and Business Analysis*. Ames, Iowa: Iowa State University Press, 1974.

F. Castle, Emergy N., and Becker, Manning H., and Smith, Frederick J. *Farm Business Management*. New York, New York: The MacMillan Company, 1972.

IV. Additional references--The following references are available from:

Farm Credit Banks of Wichita
c/o Farm Credit Banks Building
161 North Main Street
Wichita, KS 67202

A. Financing Modern Agriculture.

B. Farm Credit Banks of Wichita--Building Tomorrow Today

C. Production Credit Associations, How They Operate. Circular 37

D. Federal Land Banks, How They Operate. Circular 35

E. Banks for Cooperatives, How They Operate. Circular 40

FARM CREDIT
UNIT VIII

INFORMATION SHEET

I. Terms and definitions

A. Debt--Obligation to pay in the future

B. Credit--Borrowing capacity of an individual or business; a debt potential. Most commonly, credit is used as a synonym of borrowed funds or debt

C. Interest--Economic "rent" paid for the use of funds; however, it is not the only component in the cost of credit. The cost of credit is the difference between the total money the borrower receives for use from the lender and the total amount of money paid to retire the loan. The cost of credit frequently includes such non-interest costs as service fees, stock investment requirements and minimum deposit requirements. Both interest and non-interest costs must be included when considering the cost of credit

D. Financial leverage--Use of borrowed funds to supplement equity capital. Financial leverage can be expressed as the ratio of debt-to-equity

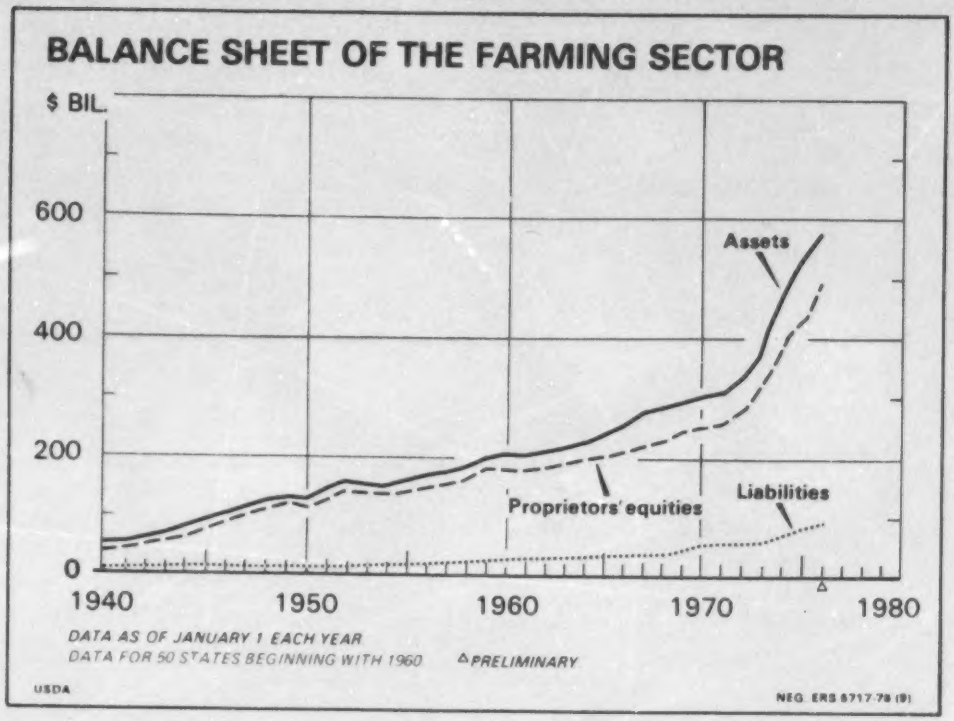
II. Role of credit in farming

A. Credit gives individuals and businesses purchasing power based on future income. If a business could invest in production items only in an amount equal to its own savings, its resources would be cut sharply and businesses would have a limited market for their goods and services

B. Credit needs of agriculture have risen dramatically in recent years due to the growing capital requirements of farm and ranch operations and to continued substitution of capital for labor

Example: Total U.S. farm debt exceeded $100 billion by the mid-1970's, up from $60 billion in 1970. Approximately 60% of the debt was real estate, and the other 40% non-real estate debt. During that period, real estate debt grew at nearly a 20% annual rate and non-real estate debt increased by nearly 15% per year

INFORMATION SHEET



Balance sheet of farming sector, 1960-76

Year	Assets	Proprietors' equities	Liabilities	Debt-to-asset ratio
	Billion dollars	*Billion dollars*	*Billion dollars*	*Percent*
1960	204.0	179.2	24.8	12.2
1961	204.8	178.6	26.2	12.8
1962	213.3	184.8	28.5	13.4
1963	222.0	190.6	31.4	14.1
1964	229.9	195.5	34.4	15.0
1965	238.0	201.2	36.8	15.5
1966	254.7	214.0	40.7	16.0
1967	267.6	223.5	44.1	16.5
1968	281.0	233.6	47.4	16.9
1969	295.3	244.8	50.5	17.1
1970	306.2	253.2	53.0	17.4
1971	317.7	263.3	54.4	17.2
1972	343.3	284.2	59.1	17.2
1973	387.8	322.4	65.4	16.9
1974	476.3	402.2	74.1	15.6
1975	520.6	438.8	81.8	15.7
1976	585.4	494.8	90.6	15.5

Reprinted from the Handbook of Agricultural Charts No. 504, United States Department of Agriculture, 1976.

INFORMATION SHEET

III. The three R's of credit management

A. Rate of return--Relates directly to financial leverage on borrowed funds. A cooperator uses borrowed capital because the expected rate of return is higher than repayment and interest on capital

B. Risk--The amount a cooperator could borrow depends on the risk bearing ability of that individual. This is tied directly to net worth. Risk to owners equity is increased as debt becomes a larger portion of total assets; stated differently, the safety of net worth decreases as the equity percentage of total assets decreases

Examples: Assume a cooperator has $45,000 to invest. The cooperator may invest this capital or may borrow $55,000 in additional funds with an interest rate of 11%. Suppose the cooperator expects to earn a 20% rate of return on the capital in question. Earnings situations from the two possibilities would be:

	BORROW ADDITIONAL CAPITAL	DO NOT BORROW
TOTAL DOLLARS USED	$100,000	$45,000
RETURN ON CAPITAL @ 20%	20,000	9,000
INTEREST @ 11%	$ 6,050	$ -0-
OPERATOR RETURN AFTER INTEREST	$+13,950	$+9,000

Assume now that the same cooperator earned only 5% (compared to 20%) on capital due to adverse economic conditions

	BORROW ADDITIONAL CAPITAL	DO NOT BORROW
TOTAL DOLLARS USED	$100,000	$45,000
RETURN ON CAPITAL @ 5%	5,000	2,250
INTEREST @ 11%	$ 6,050	$ -0-
OPERATOR RETURN AFTER INTEREST	$- 1,050	$+2,250

This cooperator would be worse off by borrowing in the second instance. The use of leverage is advantageous as long as the money invested makes a return greater than the cost of the borrowed funds

C. Repayment capacity--Relates to liquidity or the firm's ability to generate sufficient cash to meet its financial commitments as they fall due. Whenever a firm cannot satisfy financial claims against it when due, it is bankrupt, even though the firm may be operating at a profit. Liquidity is needed to cope with uncertain occurences on unfavorable events or unfavorable investment opportunities. The loss of liquidity reduces flexibility of the firm, making it less responsive to change. One source of liquidity is found in the credit reserve of the firm. A firm's credit reserve is in its unused borrowing capacity. If no borrowing has occurred, the entire credit capacity serves as a liquid reserve

INFORMATION SHEET

IV. Stages of the farm business life cycle

(NOTE: Credit use is affected by an observed time pattern or life cycle of the farm business that influences cooperators planning horizon. Generally, a farm business can be expected to pass through four stages in its life cycle.)

A. Establishment--Main objective of the beginning manager appears to be establishment in agriculture with a viable organization and control of sufficient resources to nurture future growth. Capital constraints during the establishment stage may be quite severe since financial management and production ability are as yet unproven

B. Expansion--Once establishment is achieved, the typical cooperator seeks to grow, either to more fully utilize management capacity, to gain economic security, or to maintain a competitive position in the industry. The manager of the growing firm, typically, is reasonably young, long on energy, and probably willing to assume a few risks

C. Consolidation--Capital accumulation and growth may have a lower value to the manager. In this stage, the cooperator appears to have control of the business, and the business is probably in its strongest financial position. The cooperator's attention will likely turn to such factors as debt-free ownership, and stability and maintenance of income. If this happens, the cooperator will have the least need for borrowed funds. However, continued growth may be the means by which the manager's financial consolidation may actually represent a shift in the manager's state of mind resulting from increased managerial maturity, rather than from overt economic behavior

D. Transfer--New objectives arise in the transfer state. The cooperator may now be relatively long on experience and capital but short on energy and length-of-planning horizon. Retirement income and inflation protection become important. If the manager is interested in continuing the farm business beyond active management, the cooperator will want to preserve management continuity and production efficiency as the business is transferred to new management. Finally, the manager is interested in transferring assets in an equitable fashion and at a minimum cost to the heirs. In large firms with several specialized managers, the effects of the transfer state may be much less noticeable

V. Sound credit principles

(NOTE: High levels of returns are based upon the right combination of land, labor, owned capital, management, and credit. The use of credit is one of the major decisions a manager makes. The wise use of credit can provide the means to growth and success. Incorrect credit decisions can mean failure.)

A. Use credit for productive purposes

(NOTE: Borrowed funds should be primarily for purposes that will increase income.)

INFORMATION SHEET

B. Limit borrowing on unfamiliar enterprises

(NOTE: Ability to manage an enterprise should be tested before it is expanded through the use of borrowed funds, if possible. If not possible, the idea should be tested on paper using conservative figures.)

C. Credit should be used where it will generate the highest return within reasonable risk limits

(NOTE: Limited dollars should be allocated first to the enterprise(s) expected to give the highest return.)

D. Know your own situation

(NOTE: Keep records, evaluate performance, and regularly review the resources available for production.)

E. Keep debts in line with income and repayment capacity

(NOTE: Cash income must be sufficient to meet operating expenses, debt retirement, expansion, and in the case of a family business, family living expenses.)

F. Shop for a loan and select a dependable lender

(NOTE: Loan terms and conditions vary by lenders. The services lenders offer and their commitment to agriculture are different.)

G. Be business-like, frank, and fair in credit dealings

(NOTE: Be prepared to present your credit case. Be able to back up your position. Pay promptly. Discuss problems early.)

VI. Classifications of credit

A. Short-term credit (production credit)--Maturities are one year or less. Purposes include purchase of seed, feed, fertilizer, and other operating inputs and payment of other farm and non-farm cash expenses. Debt instrument used is a promissory note, usually secured by equipment, crops, livestock, or general security (available equity shown on net worth statement)

(NOTE: Collateral is not always required for short-term loans. High grade credit risks, honest, well-established farmers or ranchers with good records of debt payment frequently can borrow without giving collateral of any kind. Another type of loan which is frequently made without requiring collateral are the so-called *character loans*. These loans are made entirely on the basis of the borrower's reputation and depend entirely on close acquaintance of the lender and borrower. They differ from other non-secured loans in that they are generally made to persons who do not have a business with which to earn and make repayment.)

INFORMATION SHEET

B. Intermediate term credit--Maturities are typically more than one year, but less than ten years. Purposes for these loans include purchase of depreciable assets such as machinery, equipment, breeding livestock, and construction or major repairs to farm buildings

C. Long-term credit--Maturities extend from ten to forty years. Purposes of these types of loans include purchases of real estate and refinancing other loans. Debt instrument is a real estate mortgage or land purchase contract

VII. Sources of credit

A. Cooperative Farm Credit System--Privately (member) owned source of long-term, intermediate, and short-term credit for farmers, ranchers and farm-related businesses. The Cooperative Farm Credit System is supervised by the Farm Credit Administration, an independent agency in the executive branch of the United States government. The system divides the country into twelve Farm Credit Districts, each of which has a Federal Land Bank and numerous locally owned Federal Land Bank Associations, a Federal Intermediate Credit Bank, numerous locally owned Production Credit Associations, and a Bank for Cooperatives. The Federal Land Bank and the Federal Intermediate Credit Bank are owned by the local Federal Land Bank Associations and Production Credit Associations, respectively. The Bank for Cooperatives is owned by the farm cooperatives that borrow from the bank

1. Federal Land Bank (FLB)--Most important institutional source of credit for real estate financing in the United States. Its sources of funds include sale of consolidated FLB bonds and system wide bonds and discount notes through a fiscal agency that has access to national money markets. Their loans are long-term and secured by a first mortgage on real estate. These loans are made through the local Federal Land Bank Associations. Loan terms include maturities of 5 to 40 years. The maximum amount loaned is 85% of the appraised value of the real estate. Payments may be constant total payments, or constant principal payment on an annual, quarterly, or monthly basis. Loans may be repaid early without penalty. All new loans have a variable interest rate, depending on money market conditions. Additional loan costs include a stock requirement

2. Production Credit Association (PCA)--Second most important source of short-term and intermediate-term financing for farm operators. Source of funds is borrowing from the Federal Intermediate Credit Bank (FICB). FICB obtains funds through the sale of consolidated Federal Intermediate Credit Bank Bonds and system-wide bonds and discount notes. Loans are made through the local PCA. Loan terms include maturities of up to seven years. Short-term loans are budgeted loans--cash is advanced and payments are scheduled according to farm cash flows. Interest rates are variable and depend upon the cost of funds from the FICB. There is also a stock purchase requirement, not exceeding 10% of the amount borrowed. The maximum size loan available depends on the capital and surplus of the PCA, as well as the credit factors

ESTIMATED TOTAL FARM REAL ESTATE DEBT OUTSTANDING
AND PERCENT HELD BY VARIOUS LENDERS
ON JANUARY 1 FOR SELECTED YEARS

OKLAHOMA

YEAR	TOTAL	FEDERAL LAND BANK	LIFE INS. COMP.	BANKS	FmHA	OTHERS
	MILLION DOLLARS	%	%	%	%	%
1960	290.7	13.4	27.6	12.7	9.0	37.4
1965	483.6	13.2	26.9	12.1	10.2	37.5
1970	774.2	16.3	22.5	11.1	11.4	38.7
1975	1295.5	26.3	13.0	12.1	10.4	38.2
1976	1466.7	30.4	11.4	11.5	9.7	37.0
1977	1629.7	32.9	10.9	11.8	9.6	34.8

INFORMATION SHEET

ESTIMATED TOTAL FARM NON-REAL ESTATE DEBT
OUTSTANDING AND PERCENT HELD BY
INSTITUTIONAL LENDERS ON JANUARY 1
FOR SELECTED YEARS

OKLAHOMA

YEAR	TOTAL MILLION DOLLARS	BANKS %	PCA %	FmHA %	FICB %
1960	181.6	71.8	16.8	7.8	3.6
1965	314.2	72.7	17.4	7.3	2.6
1970	487.5	64.6	27.3	4.3	3.8
1975	1020.0	71.7	19.2	4.6	4.4
1976	1075.0	73.1	18.9	4.6	3.4
1977	1194.5	73.0	20.2	4.1	2.7

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B. Commercial banks--Privately owned corporations chartered under either federal or state law. Banks are regulated and supervised by the United States Comptroller of the Currency, the Federal Reserve System, the State Banking Department, and the Federal Deposit Insurance Corporation. Commercial banks are the most important source of short-term and intermediate term credit in Oklahoma. Sources of funds for commercial banks include time and demand deposits, primarily from the local area. Other possible sources of funds include participation with correspondent banks and local Production Credit Associations, discounting notes with the Federal Intermediate Credit Bank, formation of agricultural credit corporations, or borrowing from the Federal Reserve Bank. Their loans include short-term, intermediate term, and long-term notes. However, most banks prefer to make short-term loans due to the short-term source of their funds for lending. Loan terms depend on the local bank, but are fairly competitive with PCA. Interest rates may tend to be more stable than those of Production Credit Associations. The maximum that may be loaned to an individual is 20% of the capital and surplus of state banks and 10% of capital, surplus, and undivided profits of national banks. When a loan exceeds the legal lending limit, a correspondent bank may be asked to participate on part of the loan

C. Farmer's Home Administration (FmHA)--Part of the United States Department of Agriculture that provides loans to farmers who cannot obtain adequate financing from other financial institutions. This includes individuals, partnerships, corporations, and cooperatives and all of its stockholders, partners, or members. There is a FmHA office for each county in Oklahoma. Sources of funds include Farmer's Home Insured notes, which are sold to investors, and guaranteed loans in which private financial institutions provide the funds with FmHA guaranteeing to cover up to 90% of any loss incurred by the lender. Types of loans include short and intermediate-term operating loans and long-term farm ownership loans

D. Life Insurance companies--Private corporations seeking profitable long-term investment opportunities for their excess fund. Their source of funds are reserves accumulated through premium payment of life insurance policies. The type of loan is long-term, typically 20 years, secured by a first mortgage on real estate. The maximum loan is usually 65 to 75% of the appraised value of the real estate, but varies depending on state law where the insurance company is chartered. Loan terms vary considerably, depending on the company. Some require an annual payment of only 2 to 3% of the original balance intially with a large balloon payment at maturity. Some companies limit pre-payment of the loan to reduce the cost of making new loans. Life insurance companies also prefer to make large land loans. Interest rates depend on returns on alterntive investment and are usually higher than those of the Federal Land Bank

INFORMATION SHEET

E. Oklahoma Commissioners of the Land Office (School Land Commission)--Provides farm real estate loans to Oklahoma residents. Their sources of funds are trust rental income, interest income, and royalty income. Their loans are long-term and are secured by a first mortgage on real estate. The maximum loan is limited to the smallest of 50% of the appraised agricultural value, $150,000 or $350 per acre. Loan terms include constant annual, or semi-annual payments, loan maturities of 33 years and an interest rate of 8 1/2 percent plus a 1% closing fee

(NOTE: Loan terms and maximum amounts of the School Land Commission are set by state law and may be changed through legislative action.)

F. Small Business Administration (SBA)--Agency of the United States government with authority to make loans to farmers who cannot meet Farmer's Home Administration eligibility requirements or obtain regular commercial financing. Cooperators, farm corporations, and partnerships qualify if maximum income does not exceed $1,000,000. Types of loans include long-term real estate loans, intermediate term, and short-term loans. Nearly all SBA farm loans are made through banks with SBA guarantees. The Small Business Administration can guarantee up to 90% of the loan up to $500,000

(NOTE: Loan terms and maximum amounts of the Small Business Administration are subject to change by congressional action.)

G. Dealer credit--Many sellers of farm inputs, such as feed, seed, fertilizer, machinery, and equipment, offer credit to farmers who purchase inputs. Types of loans include short-term loans to purchase operating inputs and intermediate loans for machinery and equipment. Their sources of funds include the dealer's supplier, the Bank for Cooperatives and commercial banks who finance the dealer's inventory. Loan maturities depend on the input being financed and the dealer. Intermediate loans are frequently of a four or five year duration; operating inputs are financed for 30 days to six months. Loan terms also vary by input and dealer. Intermediate loans may cover 70 to 80% of the value of the machinery and carry effective interest rates of from 10 to 15%. Loans for operating inputs may be carried on open account for 30 days. Longer loans frequently have finance charges of 1 to 1 1/2 percent per month. Input dealers may also offer a cash discount of 1 to 2 percent for early payment

H. Individuals and sellers--Single most important source of real estate financing in the United States and Oklahoma. More than one-third of the total real estate debt is held by sellers of real estate and other individuals. Sources of funds include personal savings, gifts, inheritances, and equity in farm land. Types of loans include land purchase contracts and conventional first mortgage loans. Loan maturities and terms vary with the individuals involved. Purchase contracts frequently involve a down payment of less than 30%. The selling price may be slightly higher than that of comparable land under conventional financing. Maturities are usually shorter and interest rates lower than for commercial banks

INFORMATION SHEET

I. Local Savings and Loan Associations--Make first mortgage, long-term loans on farm land and farm residences. The maximum size of the loan is 80% of the value of the farm property and the maximum maturity is 25 years

J. Agricultural credit corporations and other financial institutions--Sources of funds include discounting farm loans with the Federal Intermediate Credit Bank, selling money market instruments such as commercial paper and bankers acceptances in the national money market, or participating and discounting loans with large banks. Their loans are usually short and intermediate term. Interest rates vary depending on the sources and cost of funds for the financial institution

VIII. Methods of computing interest

A. Simple interest--Amount paid for borrowing money that is repaid in a single lump sum

(NOTE: The simple interest method is also used when calculating interest on an amortized loan. An amortized loan is retired through a series of principal payments, usually on a regular schedule. Interest is paid each time a principal payment is made and is calculated on the outstanding (unpaid) amount of the loan after the last payment. This may be done in one of three ways: constant total payment, constant principal payment, and partial payment with a large balloon payment at maturity. Even though the constant principal payment yields the lowest total interest payment, it may not fit all situations due to the higher annual payment in the early years when the firm may need as much cash as possible to meet other obligations and for growth.)

1. Simple interest is computed by multiplying the amount of money borrowed (the principal) times the contractual interest rate times the length of time (in years or fractions thereof) the money used

Example: Loan of $1,000 for one year at 9% interest

INTEREST COST = PRINCIPAL x INTEREST RATE x TIME

$1,000 x .09 x 1 = $90

At the end of the year, the borrower would pay $1,000 principal plus $90 interest

2. If only the dollar cost of the interest is known, the simple interest rate can be calculated

Example: Loan of $1,000 used for one year with an interest charge of $90

$$\text{SIMPLE INTEREST RATE} = \frac{\text{DOLLAR COST OF CREDIT}}{\text{PRINCIPAL} \times \text{TIME}}$$

$$\frac{\$90}{\$1,000 \times 1} = .09 = 9\% \text{ per year}$$

INFORMATION SHEET

B. Remaining balance method--This method is used on many operating loans and is quite common on budgeted operating loans. Under this method, interest is calculated by multiplying the principal outstanding by the contractual rate for the period in question

Example: Determine the interest payment on a 9% loan with $500 outstanding for 5 months

INTEREST COST = PRINCIPAL OUTSTANDING x INTEREST RATE x TIME LEFT

$$\$500 \times .09 \times 5/12 = \$18.75$$

Given the same situation as above, if this loan was budgeted and $300 was needed for 5 months and the other $200 was needed for only 2 months, the interest payment would be:

$$\$300 \times .09 \times 5/12 + \$200 \times .09 \times 2/12$$

$$\$11.25 + \$3.00 = \$14.25$$

Any loan in which interest is calculated by the simple interest method, the contractual interest rate and the annual interest rate are the same

C. Add-on Method

1. Interest is calculated on the original loan for the entire period of the loan. Typically, this method is used when purchasing machinery, equipment, and automobiles

2. The formula to obtain the exact annual interest rate involves equating present value of the loan with present value of the payments; and computation is complicated. However, there is a simpler method that will give an estimate of the annual interest rate

Example:

$$\text{ANNUAL INTEREST RATE} = \frac{2 \times \text{NUMBER OF PAYMENTS PER YEAR} \times \text{DOLLAR AMOUNT OF CREDIT}}{\text{AMOUNT BORROWED} \times (\text{TOTAL NUMBER OF PAYMENTS} + 1)}$$

Assume a $3,000 automobile loan, 9% interest, with a 3 year maturity period. Payments are made annually. Interest is $810

$$\frac{2 \times 1 \times \$810}{\$3,000 \times 4} = .135 = 13.5\%$$

This formula for the annual interest rate may be applied to any loan for which repayments are in equal periodic payments

INFORMATION SHEET

D. Discount method--Often used for preparing repayment schedules for installment loans. The financing charges are "discounted" from the original amount of the loan before the principal is paid out to the borrower under this method. Assume a $3,000 loan for 3 years at 9% interest. Using this method, the interest cost is still $810, but this is subtracted from the $3,000, so the borrower would only receive $2,190. Using the add-on method of computing interest, annual interest is calculated as follows

$$\text{ANNUAL INTEREST RATE} = \frac{2 \times 1 \times 810}{2190 \times (3+1)} = .185 = 18.5\%$$

This loan would be repaid in equal installments of $3,000/3 = $1,000 per year

IX. Factors that affect cost of credit

(NOTE: Cost of credit is the difference between the total money the borrower receives for use from lender and the total money paid to retire the loan. Even when two lenders quote the same interest rate, the actual dollars charged may vary considerably.)

A. Cost of money in the money market

B. Cost of servicing the loan, which includes the cost for making, handling, collecting, and keeping records on the loan

C. Risk associated with a particular loan

D. Service charges that increase the total cost of the loan and thus raise the rate of interest. The impact on rates of a given service charge decrease with increased size and maturity of the loan

EFFECT OF A $15 SERVICE CHARGE OF THE ANNUAL INTEREST RATE BY SIZE AND MATURITY OF LOAN

MATURITY OF LOAN IN MONTHS	SIZE OF LOAN $100 (PERCENT)	$1,000 (PERCENT)	$10,000 (PERCENT)
1	180.0	18.0	.8
6	30.0	3.0	0.3
12	15.0	1.5	0.15
36	5.0	0.5	0.05

(NOTE: The rate impact is based only on service charge and does not include any charge for interest.)

INFORMATION SHEET

E. Stock requirements--Loans from the various lending agencies of the Farm Credit System require a stock purchase and many banks and other lending institutions require an offsetting balance ; the effect of either is to raise the annual interest rate

Example: Assume a $12,000, four-year loan which is to be repaid in four equal annual installments on the principal at the end of each year at a contractual rate of 9%, remaining balance method with a 5% stock requirement. In order to receive $12,000, the operator would have to borrow $12,000/.95 or $12,632 to cover the 5% stock requirement. Each annual principal payment would be 12,632/4 = $3,158. Interest payment each year would be:

YEAR 1 $12,632 x .09 x 1 year = $1,136.88

YEAR 2 9,474 x .09 x 1 year = 852.66

YEAR 3 6,316 x .09 x 1 year = 568.44

YEAR 4 3,158 x .09 x 1 year = 284.22

Payment of the last year would consist of $3,158 principal, plus $284.22 interest, less $632 which was the stock requirement. Calculating the annual interest requires a complicated formula plus a set of present value tables; however, an approximation may be made using the following formula:

ANNUAL INTEREST RATE = CONTRACTUAL RATE x (1 + STOCK REQUIREMENT)

In this example, it would be:

ANNUAL INTEREST RATE = .09 x (1 + .05) = 0.0945

F. Number of installments--Increasing the number of installments for a given loan increases the equivalent effective rate for any specified contractual rate. The impact is equivalent to the effective rate for any specified contractual rate. The impact varies somewhat depending on the method for computing interest costs

INFORMATION SHEET

THE EFFECT OF INCREASING THE NUMBER OF INSTALLMENTS ON THE ANNUAL INTEREST RATE

NUMBER OF INSTALLMENTS	METHOD OF COMPUTING INTEREST		
	REMAINING-BALANCE	ADD-ON	DISCOUNT
1	7.0	7.0	7.53
2	7.0	9.3	10.04
4	7.0	11.2	12.04
6	7.0	12.0	12.91
12	7.0	12.92	13.90

(NOTE: This chart is based on a loan of $1,000 with one-year maturity at a 7% annual contract rate. These figures are approximations and were tabulated using the formula given in the information sheets.)

FARM CREDIT
UNIT VIII

ASSIGNMENT SHEET #1--COMPUTE INTEREST EXPENSE

Assume you go to the bank to get an operating loan. You have determined that $37,000 is needed over the next eight months. You have a choice of taking the whole $37,000 now, or making a budgeted loan of $20,000 for eight months, $2,000 for six months, and $15,000 for four months. You will have to pay 9%, remaining balance method in either case. How much interest expense will be saved by taking the budgeted loan?

FARM CREDIT
UNIT VIII

ASSIGNMENT SHEET #2--CALCULATE THE COST OF CREDIT

A cooperator is contemplating buying 640 acres of farmland. This land would cost $500 per acre for a total cost of $320,000. The cooperator can get an amortized loan with equal annual payments for 30 years at 9 1/2% interest. Using the accompanying chart, determine what this cooperator's annual payment would be, and how much of the first year's payment would be interest expense.

ASSIGNMENT SHEET #2

ANNUAL PAYMENT

Necessary to Amortize a Loan of $1000

Rate / Years	6%	6½%	7%	7½%	8%	8½%	9%	9½%	10%	12%
2	545.44	549.27	553.10	556.93	560.77	564.62	568.47	572.33	576.20	591.70
3	374.11	377.58	381.06	384.54	388.04	391.54	395.06	398.58	402.12	416.35
4	288.60	291.91	295.23	298.57	301.93	205.29	308.67	312.07	315.43	329.24
5	237.40	240.64	243.90	247.17	250.46	253.77	257.10	260.44	263.80	277.41
6	203.37	206.57	209.80	213.05	216.32	219.61	222.92	226.26	229.61	243.23
7	179.14	182.34	185.56	188.81	192.08	195.37	198.70	202.04	205.41	219.12
8	161.04	164.24	167.47	170.73	174.02	177.34	180.68	184.05	187.45	201.31
9	147.03	150.24	153.49	156.77	160.08	163.43	166.80	170.21	173.65	187.68
10	135.87	139.11	142.38	145.69	149.03	152.41	155.83	159.27	162.75	176.99
11	126.80	130.06	133.36	136.70	140.08	143.50	146.95	150.44	153.97	168.42
12	119.28	122.57	125.91	129.28	132.70	136.16	139.66	143.19	146.77	161.44
13	112.97	116.29	119.66	123.07	126.53	130.03	133.57	137.16	140.78	155.68
14	107.59	110.95	114.35	117.80	121.30	124.85	128.44	132.07	135.75	150.88
15	102.97	106.36	109.80	113.29	116.83	120.43	124.06	127.75	131.48	146.83
20	87.19	90.76	94.40	89.10	101.86	105.68	109.55	113.48	117.46	133.88
25	78.23	81.99	85.82	89.72	93.68	97.72	101.81	105.96	110.17	127.50
30	72.65	76.58	80.59	84.68	88.83	93.06	97.34	101.63	106.08	124.15
35	68.98	73.07	77.24	81.49	85.81	90.19	94.64	99.14	103.69	122.32
40	66.47	70.70	75.01	79.41	83.87	88.39	92.96	97.59	102.26	121.31

FARM CREDIT
UNIT VIII

ASSIGNMENT SHEET #3--COMPARE FINANCING METHODS

A local cooperator is going to buy a tractor. The tractor costs $20,000. The cooperator may finance this tractor in one of two ways:

1. Dealer financed, the terms are a 5 year loan with equal annual payments, interest at 8 percent figured by the add-on method

2. Bank financed, the terms are a 5 year loan with equal annual principal payments, interest at 12 percent figures by the remaining balance method

Which method of financing would this cooperator choose. Assuming the cooperator could afford to pay a maximum of $6,000 in the first year, which method would be chosen?

FARM CREDIT
UNIT VIII

ANSWER TO ASSIGNMENT SHEETS

Assignment Sheet # 1

$37,000 x .09 x 8/12 = $2,220 interest expense

$20,000 x .09 x 8/12	=	$1200
+$ 2,000 x .09 x 6/12	=	90
= 15,000 x .09 x 4/12	=	450
		$1740

$2,220 - $1,740 = $480

You would have a savings of $480.

Assignment Sheet # 2

The payment necessary to amortize a loan of $1,000 for 30 years at 9 1/2 percent is $101.69. The cooperator would be borrowing $320,000; therefore:

$101.69 x 320 = $32,540.80

The cooperator would pay $32,541 per year.

Interest expense the first year would be:

$320,000 x .095 = $30,400

The interest expense in the first year would be $30,400.

Assignment Sheet # 3

Dealer financed his total interest charge would be:

$20,000 x .08 x 5 years = $8,000

His annual payments would be 28,000/5 = $5,600.

Assignment Sheet # 3 (Cont)

Bank financed his payment and total interest would be:

	Principal	Interest	Annual payment
Year 1	$4,000	$2,400	$6,400
Year 2	$4,000	$1,920	$5,920
Year 3	$4,000	$1,440	$5,440
Year 4	$4,000	$ 960	$4,960
Year 5	$4,000	$ 480	$4,480
		$7,200 = total interest	

This cooperator would choose the bank financing and would save $800 in interest expense. If only enough funds were generated to service $6,000 the first year, the cooperator would have to go with the dealer financing.

PARTIAL BUDGETING
UNIT IX

UNIT OBJECTIVE

After completion of this unit, the cooperator should be able to discuss the benefits and uses of partial budgeting. The cooperator should be able to discuss the principals of partial budgeting and identify the components of a partial budget. This knowledge will be evidenced through demonstration and by completion of a partial budget.

SPECIFIC OBJECTIVES

After completion of this unit, the cooperator should be able to:

1. Name uses of partial budgets.
2. List the principals of partial budgeting.
3. Name benefits of partial budgets.
4. Identify components of a partial budget.
5. Discuss the partial budgeting process.
6. Discuss applications of partial budgeting.
7. Complete partial budgets.

PARTIAL BUDGETING
UNIT IX

SUGGESTED ACTIVITIES

I. Suggested activities for the instructor:

A. Provide cooperator with objective sheet.

B. Provide cooperator with information and assignment sheets.

C. Make transparencies.

D. Discuss unit and specific objectives.

E. Discuss information and assignment sheets.

II. Instructional materials:

A. Objective sheet

B. Information sheet

C. Assignment Sheet #1--Complete Partial Budgets

D. Answers to assignment sheet

III. Unit references:

A. Kuhlman, Richard H., Casey, James, E., and Jobes, Raleigh A. III. *Partial Budgeting in Farm Management.* Stillwater: Oklahoma State University, OSU Extension Facts No. 142, 1978.

B. Jobes, Raleigh A. III. *Use of Budgets in Farm Management.* Stillwater: Oklahoma State University, OSU Extension Facts No. 139, 1976.

C. Williams, Joseph E., and Casey, James E. *Farm and Ranch Management I Notes.* Stillwater: Oklahoma State University/Department of Agricultural Economics, N.D.

D. Osburn, Donald D., and Schneeberger, Kenneth C. *Modern Agriculture Management.* Reston: Virginia, Prentce-Hall Company, 1978.

E. Castle, Emery N., and Becker, Manning H., and Smith, Frederick J. *Farm Business Management.* New York, New York: The Macmillan Company, 1972.

F. Herbst, J. H. *Farm Management--Principals, Budgets, Plans.* Champaign, Illinois: Stipes Publishing Company, 1976.

PARTIAL BUDGETING
UNIT IX

INFORMATION SHEET

I. Uses of partial budgets

A. Estimates economic effect of adjustments in some portion of the farm business

B. Evaluates changes in uses of resources which are not fixed

(NOTE: With partial budgeting, the cooperator assumes that many aspects of the business are fixed in the short-run.)

C. Makes only the necessary adjustments when only a relatively small change is being considered in the business

D. Shows only the effect of a change in the business on net income

(NOTE: Partial budgeting is a marginal concept and does not reflect total revenue, total expenses or net income.)

II. Principals of partial budgeting

(NOTE: Partial budgeting is based on the principal that a small change in the organization of a farm businss will have one or more of the following effects listed below.)

A. Change will eliminate or reduce some costs

B. Change will eliminate or reduce some returns

C. Change will cause additional costs to be incurred

D. Change will cause additional revenues to be incurred

(NOTE: The net effect will be the sum of the positive economic effects minus the sum of the negative economic effects.)

III. Benefits of partial budgets

A. Helps evaluate changes

Examples: Adding to an enterprise, introducing a new enterprise, purchase of a new machine, changing production practices

INFORMATION SHEET

B. Provides a plan for the future

(NOTE: One of the most beneficial practices the cooperator can adopt is to plan for the future, particularly an uncertain one. When heading into a new operating season, even a poor plan is better than no plan at all. The use of budgets helps the manager to organize financial and physical planning. By employing the principals of budgeting, the farm manager can compare costs and returns of alternative plans of action for the farm business. Ideally, the manager will be able to choose that course of action which most nearly aligns with long-range goals.)

IV. Components of a partial budget--The typical partial budget usually consists of a seven-point plan. These seven components are additional costs, reduced returns, reduced costs, additional returns, totals of the first two and the second two, and a net difference. Each of the four categories of costs and returns is used to estimate the effects of a proposed change in the business organization

(NOTE: The figure on the next page shows the basic form of the typical partial budget.)

A. Column one consists of estimates of negative economic effects resulting from the proposed change. Additional costs are those that will occur if the change takes place. However, this does not include costs that are common to both the present and proposed business organization; stated differently, any cost that does not change will not be included in the partial budget

1. Reduced returns are returns that would not be received under the proposed change

2. The total of additional costs and reduced returns is an estimate of the total negative economic effects of making the proposed change

B. Column two consists of estimates of the positive economic effects of the proposed change. Additional returns are the added receipts that will be received if the alternative plan is adopted

1. Reduced costs are those costs that will no longer be incurred if change in organization is initiated

2. Additional returns and reduced costs are totaled at the bottom of column two

C. Net difference between positive and negative economic effects is an estimate of the net effect in making the proposed change. A positive net difference indicates the potential increase in net returns if the change is made. Conversely, a negative net difference is an estimate of the reduction in net returns if the change is adopted

INFORMATION SHEET

V. The partial budgeting process

A. The success of the partial budget is in the accuracy of its prediction, which depends of the accuracy of the information and the estimates it contains. The cooperator must collect all pertinent factual data about the proposed change

Examples: Future prices, yields, gains, current costs of factors of production, costs of capital, current cattle prices

PARTIAL BUDGET FORM

SITUATION:

_____

ADDITIONAL COSTS	ADDITIONAL RETURNS
REDUCED RETURNS	REDUCED COSTS

A. Total Annual Additional Costs and Reduced Returns _____

B. Total Annual Additional Returns and Reduced Costs _____

NET CHANGE IN INCOME (B MINUS A) _____

_____

_____

INFORMATION SHEET

B. Generation of future unknowns, particularly future prices, is the most difficult information to predict. The cooperator must estimate yields, and prices to get an idea of what returns will not be received and what returns will be received

1. Estimation of yield data can be obtained from several sources. Individual farm records of yields is the best source of information. Farm records will show a history of the level of production of a crop. This history, combined with an assessment of current crop conditions, should accurately predict future yields, given normal weather and other conditions. Other sources of yield estimates are neighboring farm histories, research reports showing average yield, and cooperator past experience. Combinations of all these sources should yield a close estimate of projected yields

2. Future product prices are the most difficult elements to predict. Agricultural economists, USDA statisticians and futures markets, are just a few resources who provide information concerning the trend of prices and national crop conditions. It will be unusual to find a predicted price for a product on a particular day. Using information published by the mentioned sources as well as the manager's intuition, will provide the best estimate of future prices for products. Perhaps a more revealing method would be to use a range of prices--low, medium, and high--to evaluate changes. This method will evaluate the price sensitivity of the projected change

C. After all pertinent data has been assembled, the budget is ready to be developed. The amount of dollar cost is calculated for each of the categories. Only the costs and returns, which will change by proceeding with the alternative plan, are used in the partial budget. Units used to analyze the change may be any size, depending on the change

Examples: The whole crop, one acre of the crop, one head of cattle, the entire herd of cattle

After the analysis has been performed, the result can be multiplied as needed to show the economic impact on the entire farm situation

(NOTE: The net result will be in the same economic direction, positive or negative, regardless of how the budget is calculated.)

D. The column totals show, respectively, the negative and positive economic aspects of the proposed change. Subtract the first column total from the second column total to obtain a net amount that reflects the change in net farm income if the proposed plan is adopted. A positive net amount says that, from an economic standpoint, it would be wise to proceed with the alternate plan. A negative amount implies that it would not be economically profitable to proceed with the change. The final decision by the cooperator should include a consideration of these results along with the other pertinent elements of the decision

INFORMATION SHEET

VI. An application of partial budgeting

A. The decision to graze out or harvest a wheat crop would have to be made around March 1 and be based on expected yields and prices of wheat and stockers. The data on prices and yields are based on representative budgets for wheat and stockers for southwestern Oklahoma (Enterprise Budgets numbers 13601336 and 76700804). Listed below are price and yield figures for the applicable period. This budget is done on a per-acre basis with a stocking rate from March 1 to May 15 of one steer per-acre of wheat:

Rate of gain per steer from March 1 to May 15--1.7 lbs. per day

Choice steers #571.25 on March 1--$70.00 per cwt.

Choice steers #701 on May 15--$66.00 per cwt.

Wheat yield--32 bushels per acre

Wheat price on June 1--$3.33 per bushel

Interest on capital (livestock) from March 1 to May 15--$1.87 per steer

Salt and mineral costs from March 1 to May 15--$1.14 per steer

Labor from March 1 to May 15--$3.39 per steer

Vet cost from March 1 to May 15--$3.15 per steer

Custom combining--$8.00 per acre

Custom hauling--$0.10 per bushel; $3.20 per acre

1. Additional costs--Includes costs which are incurred by keeping the steers through May 15. Four of the above items are listed in this category. Interest expense is increased because the cattle are held two and one-half months longer, salt and mineral costs are increased, as well as labor cost and veterinary services. It is important to note that these costs are incurred only when the cattle are kept, not if they are sold

2. Reduced returns--Value of the wheat not received when grazed out is listed. Yield and price shown are estimates based on current expectations. Totaling column one shows a figure of $116.71. This represents the total negative economic impact of the proposal on the farm operation

3. Reduced costs--Lists the costs of custom combining and hauling which are not incurred if the wheat is grazed out. Both rates are representative of current rates in the region

INFORMATION SHEET

4. Additional returns--Value of beef grown from March 1 to May 15 at a stocking rate of 1 steer per acre and gaining 1.7 pounds per day. The value of the steer on March 1 is subtracted from its value on May 15 to yield a dollar value of the potential gain. Listed weights are averages, but the prices are actual choice steer prices in the weight range on those days. The total of column two is $73.99. Subtracting the total of column one from column two yields a net value of -$42.12. This represents the amount of economic advantage per acre of grazing out the wheat versus selling the steers on March 1 and harvesting the wheat

INFORMATION SHEET

PARTIAL BUDGET FORM

SITUATION: LEAVE STOCKERS ON WHEAT PASTURE FROM MARCH 1 TO MAY 15 RATHER THAN REMOVE STOCKERS AND COMBINE WHEAT.

ADDITIONAL COSTS[1]		ADDITIONAL RETURNS	
INTEREST IN INVESTMENT	$ 1.87	ADDED RETURN IF STOCKERS	
VETERINARIAN COSTS	$ 3.15	ARE KEPT TO MAY 1	$ 62.79
SALT AND MINERALS	$ 1.14		
LABOR	$ 3.39		
SUBTOTAL	$ 9.55		

REDUCED RETURNS		REDUCED COSTS	
WHEAT PRODUCTION		CUSTOM COMBINING	$ 8.00
32 BUSHEL AT $3.33/BU.	$106.56	CUSTOM HAULING .10/BU.	$ 3.20
SUBTOTAL	$106.56	SUBTOTAL	$11.20

A. TOTAL ANNUAL ADDITIONAL COSTS AND REDUCED RETURNS	$116.11	B. TOTAL ANNUAL ADDITIONAL RETURNS AND REDUCED COSTS	$73.99

NET CHANGE IN INCOME (B MINUS A) -$42.12

[1]ESTIMATES ARE BASED ON ACTUAL DATA FROM REPRESENTATIVE BUDGETS FROM SOUTHWESTERN OKLAHOMA (ENTERPRISE BUDGETS NUMBERS #13601336 AND #76700804)

SOLUTION: Remove stockers on March 1 and combine wheat as planned previously.

INFORMATION SHEET

B. Reasoning behind the budget formula is simple. On or about March 1, the cooperator must decide whether to sell the stocker steers and harvest the wheat later in the spring or keep the steers to graze out the crop. Prices are a main determinant in this decision and can only be estimated for the future. By combining known figures with estimates of future yields and prices, the cooperator can compare alternative plans for action for profitability

C. Data in this example is based on representative budgets for a large production region. Individual cooperators should strive to modify estimates to more closely conform to their actual situations. Additionally, individual farmers may find some of the included costs not applicable to their situation or other costs that should be included. It should be re-emphasized that the partial budget includes only costs that change. Such costs that cannot be affected should not be included in the analysis

D. Partial budgeting is a simplified procedure that will aid producers in every day decision making. This analysis is not designed for total farm planning, but rather to estimate the economic consequences of making a change in some phase of the farm operation. The partial budgeting concept is a step-by-step process for identifying all the costs and returns that change due to alterations in the production process. Once these costs and returns are identified, they are weighed against each other to estimate the economic consequences of the change. In using this procedure, remember that the results can only be as good as the input data. Therefore, care should be taken when preparing estimates for the various categories. In addition, various levels for changing values such as yields and prices, should be tested for their effect on the ultimate outcome

PARTIAL BUDGETING
UNIT IX

ASSIGNMENT SHEET #1--COMPLETE PARTIAL BUDGETS

I. For the last twenty years, you have stored grain at the local cooperative until marketed. On the average, you stored wheat six months before selling it. Now, you are considering setting up your own storage facilities, including a ten thousand bushel bin, an auger, and a concrete unloading pad. Assume the following data has been assembled:

A. Total fixed cost of the investment (interest, depreciation, insurance, and taxes)--$822 per year

B. Variable costs are:

1. Electricity for moving the grain in and out--1/2¢ per bushel

2. Labor and truck charges are the same for filling the bin as for delivering to the elevator at harvest

3. Labor and trucking from the bin to the elevator are 3¢ per bushel

4. The elevator charges 2 1/2¢ per bushel per month for storage

C. Assume the long range average price for wheat to be $3.50 per bushel. If storing the grain, you must assume a 3% shrink on the grain which would normally be assumed by the elevator

Complete a partial budget to determine if you should purchase the storage facilities

(NOTE: Use the costs for the entire 10,000 bushels.)

II. Assume you are a wheat producer. You have been having your wheat cut in the past by a custom operator. The custom cutter charged $10 per acre to cut the wheat, plus 10¢ per bushel to haul the wheat. When the custom operator cut your wheat, you averaged 20 bushels per acre. As a progressive cooperator you would like to purchase a new machine. To own your own machine and use your own truck, you would average $2.40 per acre in variable costs, and $6.96 per acre in fixed costs. Since you own your own truck, you can haul the wheat for 6¢ per bushel. If you buy your own machine, 1.8 hours per acre of labor would have to be hired at $3.00 per hour. By cutting your own wheat you can improve your yield to 23 bushels per acre. Estimated net wheat price is $3.50 per bushel. Use this information and partial budgeting procedures to determine which alternative is more profitable.

PARTIAL BUDGETING
UNIT IX

ANSWERS TO ASSIGNMENT SHEET #1

PARTIAL BUDGET FORM

SITUATION: PURCHASE STORAGE FACILITIES OR CONTINUE TO STORE AT THE ELEVATOR.

ADDITIONAL COSTS		ADDITIONAL RETURNS	
FIXED COSTS	$ 822.00		-0-
ELECTRICITY	$ 50.00		
TRUCKING	$ 300.00		
SUBTOTAL	$1,171.00		

REDUCED RETURNS		REDUCED COSTS	
SHRINKAGE	$1,050.00	STORAGE	$1,500.00
SUBTOTAL	$1,050.00	SUBTOTAL	$1,500.00

A. TOTAL ANNUAL ADDITIONAL COSTS AND REDUCED RETURNS	$2,222.00	B. TOTAL ANNUAL ADDITIONAL RETURNS AND REDUCED COSTS	1,500.00
		NET CHANGE IN INCOME (B MINUS A)	- 722.00

CONCLUSION: FROM AN ECONOMIC STANDPOINT, YOU WOULD NOT PURCHASE THE FACILITIES

PARTIAL BUDGET FORM

SITUATION: PURCHASE STORAGE FACILITIES OR CONTINUE TO STORE AT THE ELEVATOR.

ADDITIONAL COSTS		ADDITIONAL RETURNS	
FIXED COSTS	$ 822.00	WHEAT	$33,950.00
ELECTRICITY	$ 50.00		
TRUCKING	$ 300.00		
SUBTOTAL	$ 1,172.00	SUBTOTAL	$33,950.00

REDUCED RETURNS		REDUCED COSTS	
WHEAT	$35,000.00	STORAGE	$ 1,500.00
SUBTOTAL	$35,000.00	SUBTOTAL	$ 1,500.00

A. TOTAL ANNUAL ADDITIONAL COSTS AND REDUCED RETURNS $36,172.00

B. TOTAL ANNUAL ADDITIONAL RETURNS AND REDUCED COSTS $34,450.00

NET CHANGE IN INCOME (B MINUS A) $- 722.00

CONCLUSION: FROM AN ECONOMIC STANDPOINT, YOU WOULD NOT PURCHASE THE FACILITIES

*THIS IS AN ALTERNATE METHOD AND GIVES THE SAME RESULTS

PARTIAL BUDGETING
UNIT IX

PARTIAL BUDGET FORM

SITUATION: PURCHASE COMBINE OR CUSTOM CUT

ADDITIONAL COSTS		ADDITIONAL RETURNS	
FIXED COSTS	$ 6.96	WHEAT (3 BU. @ $3.50)	$10.50
VARIABLE COSTS	$ 2.40		
HAULING (23 BU. @ 6¢/BU.)	$ 1.38		
LABOR (1.8 HR. @ $3.00/HR.)	$ 5.40		
SUBTOTAL	$16.14	SUBTOTAL	$10.50

REDUCED RETURNS		REDUCED COSTS	
	-0-	CUSTOM CUTTING	$10.00
		CUSTOM HAULING (20 BU. @ 10¢/BU.)	$ 2.00
		SUBTOTAL	$12.00

A. TOTAL ANNUAL ADDITIONAL COSTS AND REDUCED RETURNS	$16.14	B. TOTAL ANNUAL ADDITIONAL RETURNS AND REDUCED COSTS	$22.50

NET CHANGE IN INCOME (B MINUS A) $ 6.36

CONCLUSION: FROM AN ECONOMIC STANDPOINT, YOU SHOULD BUY THE COMBINE, CUT YOUR OWN WHEAT, AND DO THE HAULING YOURSELF

FINANCIAL STATEMENTS
UNIT X

UNIT OBJECTIVE

After completion of this unit, the cooperator should be able to discuss purposes and types of financial statements. The cooperator also should be able to construct financial statements. This knowledge will be evidenced by completion of assignment sheets and actual use of financial statements on the home farm.

SPECIFIC OBJECTIVES

After completion of this unit, the cooperator should be able to:

1. Match terms associated with financial statements to the correct definitions.
2. Name reasons for making financial statements.
3. Explain the net worth statement.
4. Discuss the income statement.
5. Construct financial statements.

FINANCIAL STATEMENTS
UNIT X

SUGGESTED ACTIVITIES

I. Suggested activities for the instructor:

A. Provide cooperator with objective sheet.

B. Provide cooperator with information and assignment sheets.

C. Make transparencies.

D. Discuss unit and specific objectives.

E. Discuss information and assignment sheets.

II. Instructional materials:

A. Objective sheet

B. Information sheet

C. Assignment Sheet #1--Construct Financial Statements

D. Answers to assignment sheet

III. Unit references:

A. Casey, James E. Jr., and Roush, Clint E. *Financial Records: Net Worth Statement.* Stillwater: Oklahoma State University, OSU Extension Facts, No. 711, 1978.

B. Williams, Joseph E., and Roush, Clint E. *Financial Records: Farm Income Statement.* Stillwater: Oklahoma State University. OSU Extension Facts, No. 729, 1977.

C. Osburn, Donald D., and Schneeberger, Kenneth C. *Modern Agriculture Management.* Reston, Virginia: The Prentice-Hall Company, 1978.

D. Smith, Frank J., and Cooper, Ken. *The Financial Management of Agribusiness Firms.* Special Report No. 26. St. Paul, Minnesota: University of Minnesota/Agricultural Extension Service Department of Agricultural Economics in cooperation with the Extension Service U.S.D.A., 1977.

E. Moeller, Robert J.; and Smith, Frank J. *Financial Analysis and Control of the Farm Supply Business.* Special Report No. 17. St. Paul, Minnesota: University of Minnesota/Agricultural Extension Service Department of Agricultural Economics in cooperation with the Extension Service U.S.D.A., 1965.

F. Castle, Emery N., Becker, Manning H., and Smith, Frederick J. *Farm Business Management.* New York, New York: The Macmillian Company, 1972.

G. James, Sydney C., and Stoneberg, Everett. *Farm Accounting and Business Analysis.* Ames, Iowa: Iowa State University Press, 1974.

H. Hopkins, John A., Barry, Peter J., and Baker, C. B. *Financial Management in Agriculture.* Danville, Illinois: The Interstate Printers and Publishers, Inc., 1973.

I. Hopkins, John A., and Heady, Earl O. *Farm Records and Accounting.* Ames, Iowa: Iowa State University Press, 1967.

J. Nelson, Aaron G., and Murray, William G. *Agricultural Finance.* Ames, Iowa: Iowa State University Press, 1968.

K. *Farm Business Analysis Instructor's Handbook.* Missouri Young Farmers Association.

FINANCIAL STATEMENTS
UNIT X

INFORMATION SHEET

I. Terms and definitions

A. Net worth statement--A summary of assets owned and claims upon them on a specified date; also referred to as a balance sheet. Assets not claimed by firms outside the business are the owner's residual claim or equity. The owner's equity is often referred to as the net worth

B. Income statement--Measures the profitability of a business over a specific period of time, generally a calendar or fiscal year; also referred to as a profit and loss statement

C. Asset--Resource owned

D. Liability--Financial claim on the owned asset

E. Receipts--All cash income from sales, government payments, rent, and other sources in the farm business

F. Expenditures--All cash outflows from the farm business, including operating expenditures and capital purchases

G. Gross cash income--Difference between cash receipts and cash expenditures

H. Net farm income--Return to unpaid family labor, management, and equity capital

II. Reasons for making financial statements

(NOTE: A series of net worth statements prepared at the same time of the year for successive years shows the change in financial position and the progress made by the firm.)

A. Liquidity

B. Solvency and financial soundness

C. Risk bearing ability

D. Amount of equity available to support new loan requests

E. Financial progress and growth

Example: Net worth spread sheets

INFORMATION SHEET

F. Basis for credit to the lender; the net worth statement shows the equity of the farm operator; gives some indication of the size and character of the business

Examples: Historical income statement gives the lender an idea of how efficiently the farmer has used resources in the past

III. Net Worth Statement--Typically divided into two major parts: assets and claims against assets. The claims are further divided into liabilities (creditor's claims) and net worth (owner's claim)

Example: The form of the net worth statement is as follows:

NET WORTH STATEMENT

ASSETS		LIABILITIES	
CURRENT ASSETS	$	CURRENT LIABILITIES	$
INTERMEDIATE ASSETS	$	INTERMEDIATE LIABILITIES	$
LONG-TERM ASSETS	$	LONG-TERM LIABILITIES	$
TOTAL ASSETS	$	TOTAL LIABILITIES	$
		+ NET WORTH	$

A. Net worth statement is also referred to as a balance sheet. This arises from the basic accounting formula:

ASSETS = LIABILITIES + NET WORTH

This basic rule indicates that net worth is the difference between the value of the assets and the amount owed creditors. This balance or equality is always maintained because the owner's claim is a residual claim. The net worth is always a picture of financial position at one point in time. Any changes in assets, liabilities or net worth are evident in successive net worth statements

B. For farm financial analysis, assets are usually classified according to liquidity

(NOTE: Liquidity in this instance refers to how quickly assets can be converted into cash.)

C. Current assets are cash and other assets which are typically converted to cash without any loss in value. Current assets include checking accounts, savings accounts, cash value of life insurance, marketable bonds, securities, pre-paid expenses, accounts receivable, crops, livestock, feed, and supplies. Crops and livestock included in the current assets are those which are normally converted to cash during the coming year

INFORMATION SHEET

D. Intermediate assets are those assets used in the production process and usually not easily converted into cash without some loss in value or expense. Intermediate assets normally are not for sale, but rather held for production of livestock or crops that subsequently are to be sold. The turnover rate for intermediate assets is typically considered to be greater than one year and less than ten years

Examples: Machinery, equipment, breeding livestock, and securities not readily marketable

E. Long-term or fixed assets are used in the production process and are considered permanent. These assets are not readily converted to cash as they are not normally held for sale

Examples: Land, improvements added to the land

F. Liabilities are claims against the assets and are usually classified according to the time period in which obligations are to be paid

G. Current liabilities are claims which fall due within one year. Typically, these are claims against the current assets of the business

Examples: Accounts payable, accrued interest, taxes, rent, short-term notes due within the year, principal payments due during the coming year on intermediate and long-term liabilities

H. Intermediate liabilities are debt obligations used to finance the intermediate assets. Maturities for these liabilities are usually greater than one year but less than ten years

Examples: Loans for machinery, equipment, and breeding livestock

I. Long-term liabilities are the counter part of long-term assets. The loans are usually 10 to 40 years in maturity

Examples: Loans on farm land, improvements to real estate

J. Net worth or owner's equity is determined by subtracting total liabilities from total assets; a residual claim measuring what remains after all debts are satisfied. Since net worth is a residual claim, it indicates the cooperator's claim against the business. The owner's claim against the business is secondary to other creditors. Thus, the cooperator must assume the risk involved in business operations. Year to year changes in net worth are important to lenders as they measure changes in the risk-bearing ability of the business

K. Prior to making entries on the statement, all depreciation schedules, inventories, and credit summary forms in the record book should be completed to date. If they are not, bring them up to date for the period which the financial statement is to represent. With the required forms completed, it is a simple matter to summarize total figures and make entries on the net worth statement (Form 27) by following instructions on the form. Because this particular statement represents assets and liabilities only in terms of dollar value, supporting inventory schedules showing number, price per unit, weight, etc., may need to be included for demonstrating credit worth when this form is being used to support a loan application

L. Net worth statement is one of the most commonly used financial tools. However, it does not measure profitability except to the extent the returns increase net worth from one period to the next. It also does not measure repayment capacity or ability to meet financial obligations. Thus, for financial analysis and credit management purposes, net worth statement should be supplemented with an income statement and cash flow projection

IV. Income statement

A. The income statement form should facilitate analysis of records. This calls for grouping similar items of income or expense in a way that makes their significance stand out without requiring much effort on the part of the cooperator. There are many expenses which apply partly to one section of the farm business and partly to another. Therefore, the division of receipts and expenses by enterprises has only a limited significance. The farm must be treated as a whole. A farm income statement (Form 28) is included in the *Oklahoma Young Farmer Association Record Book*. The basic sections of this income statement are cash receipts, cash expenditures, gross cash income, changes in inventories, value of home used products, and net farm income

B. One method for determining net income is the accrual method of accounting. The accrual method more accurately reports the true net income derived from farm operations during an accounting period. Accrual statement reflects receipts and expenses during the period when actually earned for incurred rather than when received or paid. It is not uncommon for a farmer to purchase and pay for production items during one accounting period and use them in another, or produce a crop and sell it in a later accounting period. The accrual method, through inventory changes, allocates expenses and receipts to the correct accounting period. For business analysis and management purposes, the accrual method of determining net farm income should be used. The farm income statement in the *Oklahoma Young Farmer Association Record Book* uses the accrual method

INFORMATION SHEET

C. Sources of data for income statement are receipt and expenditure accounts and the inventory accounts. Since receipts and expenditures are summarized in the cash flow summary (Form 26), this may be a more convenient source for the necessary data on receipts and expenditures. Also needed is a summary of the data on products used in the home or an estimation of the value of home products used in the home. With this data assembled, it is a simple matter to summarize total figures and make entries on the farm income statement (Form 28) by following instructions

D. The income statement gives a good picture of a business. When statements are available for several years, they may indicate trends which are very valuable in financial analysis and provide one of the best overall long-run efficiency measures. If statements for other similar farms in the area are available, one can obtain a good picture of how the subject farm ranks on various financial and management factors. One basis for comparison is the plan or budget which the operator has in mind when the year started. In what respects did results come up to or exceed original intentions? If the records are actually to be used as a tool of managerial control, this is the most important comparison of all. The income statement also provides valuable data for use in budget analysis to determine whether or not additional capital can be profitably employed in the business

FINANCIAL STATEMENTS
UNIT X

ASSIGNMENT SHEET #1--CONSTRUCT FINANCIAL STATEMENTS

A farm manager has made an historic cash flow statement for 1978. With this cash flow statement and the following data, build this manager's net worth statement and farm income statement for 1978.

The farm's current assets are:

	December 31, 1977	December 31, 1978
Cash in farm account	$ 300	$ 300
Purchased feed	270	250
Stored crops	2,625	3,150
Livestock supplies	250	270

The farm's intermediate assets are:

	Dec. 31, 1977	Dec. 31, 1978
Purchased breeding livestock	$15,250	$11,675
Raised breeding livestock	9,675	13,250
Vehicles	8,400	7,560
Machinery and equipment	40,000	37,000

The farm's long-term assets are:

		Dec. 31, 1977	Dec. 31, 1977
Buildings and fences		$ 8,250	$ 7,850
Farm land (book value)	200 ac.	70,000	70,000
	110 ac.	30,250	30,250

The farm's current liabilities are:

	Dec. 30, 1977	Dec. 31, 1978
Operating loan	$4,000	$1,390
Intermediates due by end of year	4,000	4,000
Long-terms due by end of year	1,194	1,302
Accrued interest	1,964	1,661
Income tax due	400	400

The farm's intermediate liabilities are:

	Dec. 31, 1977	Dec. 31, 1978
Machinery loan (4 yr. @ 9.5%)	$12,000	$8,000

The farm's long-term liabilities are:

	Dec. 31, 1977	Dec. 31, 1978
Land loan (20 yr. @ 9%)	$53,712	$52,411

	LINE	JAN.	FEB.	MAR.	APR.	MAY	JUNE	SUBTOTAL
RECEIPTS								
Crop Sales	1							
	2							
	3							
	4							
Government Payments	5							
Custom Work	6							
Dividends, Refunds, Resales	7							
Cash Rent, Other Farm	8							
Livestock Products (add columns 9-10)	10							
Misc. Receipts (add columns 11-14)	14							
Non-Breeding Livestock Raised (add cols. 15-16)	16							
OPERATING SALES TOTAL	A							
Livestock Purchd. for Resale Sales Tot. (add cols. 17-18)	18							
Breeding Livestock Sales (columns 19-21)	21							
Mach., Equip., Bldgs. Sold	22							
CAPITAL SALES TOTAL (add lines 21-22)	B							
TOTAL FARM RECEIPTS (line A plus 18 plus B)	C							
MONEY BORROWED summary only	23							
NON-FARM RECEIPTS	24							
TOTAL DOLLARS AVAILABLE (add lines C plus 23 plus 24)	D							
EXPENDITURES								
Hired Labor	25							
Repairs	26							
Interest	27							
Feed	28							
Seed, Plants	29							
Fertilizer, Lime, Chemicals	30							
Machine Hire	31							
Supplies	32							
Breeding Fees	33							
Misc. Expenses	34							
Vet. Medicine	35							
Fuel and Oil	36							
Storage	37							
Taxes	38							
Insurance	39							
Utilities	40							
Cash Rent Paid	41							
Freight-Trucking	42							
Conservation Expense	43							
OPERATING EXPEND. TOTAL (lines 25-43)	E							
Livestock Purchd. for Resale Tot. (add cols. 43-44)	45							
Breeding Stock Purchases	46							
	47							
Mach. and Equip. Purchased	48							
Land and Bldg. Improvements	49							
CAPITAL EXPENSES TOTAL (lines 45-48)	F							
TOTAL FARM EXPENSES (line E plus 44 plus F)	G							
Principal Paid	50							
Non-Farm Exp. & Investments	51							
Family Living	FL							
TOTAL DOLLARS USED (lines G thru FL)	H							
Cash Difference for Month (D minus H)	I							
Cash Balance Beginning of Month (line I last month)	J							
Cash Balance End of Month (J + I)	K							
		JAN.	FEB.	MAR.	APR.	MAY	JUNE	SUBTOTAL

FORM 26 **CASH FLOW** **FINANCIAL PLAN OR SUMMARY**

	LINE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
RECEIPTS								
Crop Sales	1							
	2							
	3							
	4							
Government Payments	5							
Custom Work	6							
Dividends, Refunds, Resales	7							
Cash Rent, Other Farm	8							
Livestock Products (add columns 9-10)	10							
Misc. Receipts (add columns 11-14)	14							
Non-Breeding Livestock Raised (add cols. 15-16)	16							
OPERATING SALES TOTAL	A							
Livestock Purchd. for Resale Sales Tot. (add cols. 17-18)	18							
Breeding Livestock Sales (columns 19-21)	21							
Mach., Equip., Bldgs. Sold	22							
CAPITAL SALES TOTAL (add lines 21-22)	B							
TOTAL FARM RECEIPTS (line A plus 18 plus B)	C							
MONEY BORROWED summary only	23							
NON-FARM RECEIPTS	24							
TOTAL DOLLARS AVAILABLE (add lines C plus 23 plus 24)	D							
EXPENDITURES								
Hired Labor	25							
Repairs	26							
Interest	27							
Feed	28							
Seed, Plants	29							
Fertilizer, Lime, Chemicals	30							
Machine Hire	31							
Supplies	32							
Breeding Fees	33							
Misc. Expenses	34							
Vet. Medicine	35							
Fuel and Oil	36							
Storage	37							
Taxes	38							
Insurance	39							
Utilities	40							
Cash Rent Paid	41							
Freight-Trucking	42							
Conservation Expense	43							
OPERATING EXPEND. TOTAL (lines 25-43)	E							
Livestock Purchd. for Resale Tot. (add cols. 43-44)	45							
Breeding Stock Purchases	46							
	47							
Mach. and Equip. Purchased	48							
Land and Bldg. Improvements	49							
CAPITAL EXPENSES TOTAL (lines 45-48)	F							
TOTAL FARM EXPENSES (line E plus 44 plus F)	G							
Principal Paid	50							
Non-Farm Exp. & Investments	51							
Family Living	FL							
TOTAL DOLLARS USED (lines G thru FL)	H							
Cash Difference for Month (D minus H)	I							
Cash Balance Beginning of Month (line I last month)	J							
Cash Balance End of Month (J + I)	K							
		JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL

FORM 27 **DATE**

NET WORTH STATEMENT: FARM AND NON-FARM

	ASSETS		
1	Family Bank Balance		
2	Savings		
3	Stocks and Bonds (present value)		
4	Accounts and Notes Receivable		
5	Life Insurance (cash value)		
6	TOTAL NON-FARM CURRENT ASSETS (add 1 - 5)		
7	Auto and other Vehicles (family-share)		
8	Household and Other		
9	Boat, Camper, etc.		
10	Non-Farm Real Estate		
11	TOTAL NON-FARM ASSETS (add 6 - 10)		
12	Cash in Farm Account		
13	Farm Accounts Receivable		
14	Swine, non-breeding (form 17 line 10)		
15	Beef, non-breeding (form 17, line 23)		
16	Dairy, non-breeding (form 17, line 35)		
17	Other, non-breeding (form 17, line 42)		
18	Purchased Feeds (form 18, line 7)		
19	Stored Crops (form 18, line 18)		
20	Growing Crops (form 18, line 21)		
21	Crop Supplies (form 18, line 36)		
22	Livestock Supplies (form 18, line 43)		
23	Other Current Assets:		
24			
25	TOTAL FARM CURRENT ASSETS (add 12 - 24)		
26	Swine, breeding (form 17, line 5)		
27	Beef, breeding (form 17, line 16)		
28	Dairy, breeding (form 17, line 30)		
29	Other, breeding (form 17, line 39)		
30	Machinery & Equipment - book value (form 14)		
31	TOTAL FARM INTERMEDIATE ASSETS (add 26 - 30)		
32	Buildings & Improvements (form 20, line 11)		
33	Land, Improvements (form 20, line 12)		
34	Land, original cost (form 19)		
35	TOTAL FARM LONG TERM ASSETS (add 32 - 34)		
36	TOTAL FARM ASSETS - book value (25 + 31 + 35)		
	ADJUSTMENTS TO PRESENT VALUES		
37	Breeding Livestock Adjustment (form 16)		
38	Mach. and Equip. Adjustment (form 14)		
39	Buildings and Land Adjustment (form 20)		
40	Other:		
41	TOTAL ADJUSTMENTS (add 37-40)		
42	TOTAL FARM ASSETS - present values (36 + 41)		
43	TOTAL ASSETS - book values (11 + 36)		
44	TOTAL ASSETS - present values (11 + 42)		

	LIABILITIES AND NET WORTH		
45	Charge Accounts		
46			
47	Notes, portion due next year		
48	Mortgages, portion due next year		
49	Accrued Interest on above		
50	TOTAL NON-FARM CURRENT LIABILITIES (add 45-49)		
51	Notes, portion due after next year		
52			
53	Mortgages, portion due after next year		
54			
55	TOTAL NON-FARM LIABILITIES (add 50-54)		
56	NON-FARM NET WORTH (line 11 minus line 55)		
57	Short Term Farm Notes Payable (form 23, col. 9)		
58			
59			
60	Accounts Payable		
61			
62			
63	Portion of Int. & Long Term Debt due next year F. 22		
64			
65			
66			
67	Accrued Liabilities (taxes, rent, interest)		
68			
69			
70	TOTAL FARM CURRENT LIABIALITIES (add 57-69)		
71	Portion of Int. Term Debt due after next year F. 22		
72	(breeding stock, machinery and equipment)		
73			
74			
75			
76	TOTAL FARM INTERMEDIATE LIABILITIES (add 71-75)		
77	Portion Lg. Term Debt due after next year F. 22		
78			
79			
80	TOTAL FARM LONG TERM LIABILITIES (add 77-79)		
81	TOTAL FARM LIABILITIES (70 + 76 + 80)		
82	FARM NET WORTH - book values (36 minus 81)		
83	FARM NET WORTH - present values (42 minus 81)		
84	TOTAL LIABILITIES (55+81)		
85	TOTAL NET WORTH - book values (43 minus 84)		
86	TOTAL NET WORTH - present values (44 minus 84)		
87	NON-FARM NET WORTH change for year (line 56)		
88	FARM NET WORTH change for year (line 82)		
89	ADJUSTMENTS - change for year (line 41)		

FORM 28 19__ PROFIT AND LOSS STATEMENT AND ANALYSIS

	RECEIPTS		
1	Crop Sales (form 26 lines 1-4)	$	
2	Misc. Receipts (form 26, lines 5-14)		
3	Raised Non-Breed Lvstk. Sales (f. 26, l. 15-16)		
4	Lvstk. Purchased for Resale Sales (F. 26, l. 17-18)		
5	Capital Sales (form 26, line B)		
A	TOTAL FARM RECEIPTS add lines 1-5 or form 26 line C		$
	EXPENDITURES		
6	Operating Expenditures (form 26, lines 25-42)	$	
7	Lvstk. Purchased for Resale (form 26, lines 44-45)		
8	Breeding Livestock (form 26, lines 46-47)		
9	Machinery & Equipment (form 26, line 48)		
10	Land & Building Imprv'ts (form 26, line 49)		
B	TOTAL FARM EXPENDITURES add lines 6-10		$
C	GROSS CASH INCOME line A - line B		$
	CHANGES IN INVENTORIES		
11	Livestock (form 17, line 44) ±	$	
12	Feed, Crops, Supplies (form 18, line 44) ±		
13	Machinery & Equipment (form 14) ±		
14	Land & Building Improvements (form 20) ±		
D	TOTAL INVENTORY CHANGE (lines 11 to 14)		$
15	Value Home Used Products (estimate)		
E	NET FARM INCOME (line C plus D plus 15)		
	BUSINESS ANALYSIS		
16	Interest Paid (form 26, line 27)		$
17	RETURN TO FARM CAPITAL, MANAGEMENT AND FAMILY LABOR (line E plus 16)		

	FARM LABOR	Hours	Value
18	Unpaid Operator		
19	Unpaid Family		
20	Hired - include paid family labor		
21	TOTAL FARM LABOR (add line 18 - 20)		$
22	Man Years Labor = total hours (line 21) ÷ 2400		man years
23	RETURN TO TOTAL FARM CAPITAL AND MANAGEMENT line 17 $_____ minus line 21 (value) $_____		$
24	RETURN TO MANAGEMENT line 23 minus (-) (.08 x avg. total farm assets) (form 27, line 42) $_____ - $_____		$
25	PER CENT RETURN ON TOTAL INVESTMENT (line 23) ÷ (Avg. Total Farm Assets) (form 27, line 42) $_____ ÷ $_____ x 100		%
	VALUE OF FARM PRODUCTION		
26	Operating Sales lines 1, 2, 3, 4,	$	
27	Gain or Loss on Purchased Items Resold ±		
28	Gain or Loss on Sale of Breeding Livestock ±		
29	Inventory Change of Feed, Crops, Sup. line 12 ±		
30	Inventory Change of Livestock line 11 ±		
31	Less Feed Purchased (form 26, line 28)		
32	Less Lvstk. Purchased for Resale line 7		
33	VALUE OF FARM PRODUCTION (add line 26-32)		$
34	VALUE OF FARM PRODUCTION PER MAN (line 33 _____ ÷ line 22 _____)		$
35	RATE OF CAPITAL TURNOVER Line 33 ÷ Avg. Total Farm Assets (form 27, line 42)		%

FINANCIAL STATEMENT ANALYSIS all figures from FORM 27

Current Ratio (Liquidity) line 25 ÷ line 70 = _____	Dollars of Working Capital line 25 minus line 70 $ ___ ___
Total Assets: Liabilities Ratio (Solvency) line 36 ÷ line 81 _____	Debt: Worth Ratio (Leverage) line 81 ÷ line 82 _____

ASSIGNMENT SHEET #1

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FINANCIAL STATEMENTS
UNIT X

ANSWERS TO ASSIGNMENT SHEET #1

See following pages.

FORM 26 **CASH FLOW** **FINANCIAL PLAN OR SUMMARY**

	LINE	JAN.	FEB.	MAR.	APR.	MAY	JUNE	SUBTOTAL
RECEIPTS								
Crop Sales Soybeans	1							
Peanuts	2							
Milo	3							
	4							
Government Payments	5							
Custom Work	6							
Dividends, Refunds, Resales	7							
Cash Rent, Other Farm	8							
Livestock Products (add columns 9-10)	10							
Misc. Receipts (add columns 11-14)	14							
Non-Breeding Livestock Raised (add cols. 15-16)	16							
OPERATING SALES TOTAL	A							
Livestock Purchd. for Resale Sales Tot (add cols 17-18)	18							
Breeding Livestock Sales (columns 19-21)	21							
Mach., Equip., Bldgs. Sold	22							
CAPITAL SALES TOTAL (add lines 21-22)	B							
TOTAL FARM RECEIPTS (line A plus 18 plus B)	C							
MONEY BORROWED summary only	23							
NON-FARM RECEIPTS	24	400	400	400	400	400	400	2400
TOTAL DOLLARS AVAILABLE (add lines C plus 23 plus 24)	D	400	400	400	400	400	400	2400
EXPENDITURES								
Hired Labor	25					161		161
Repairs	26	126	199	149	137	341	117	1069
Interest	27			1520				1520
Feed	28	666	747	747	261	18	18	2457
Seed, Plants	29					3007		
Fertilizer, Lime, Chemicals	30	1785			563	2588	638	5574
Machine Hire	31		525			113		638
Supplies	32							
Breeding Fees	33							
Misc. Expenses	34							
Vet. Medicine	35	141			281			
Fuel and Oil	36	111	290	221	179	458	144	1403
Storage	37							422
Taxes	38							
Insurance	39							
Utilities	40							
Cash Rent Paid	41	800						800
Freight-Trucking	42							
Conservation Expense	43							
OPERATING EXPEND. TOTAL (lines 25-42)	E	3629	1761	2637	1421	6686	917	17051
Livestock Purchd. for Resale Tot. (add cols 43-44)	45							
Breeding Stock Purchases	46	600						600
	47							
Mach. and Equip. Purchased	48							
Land and Bldg. Improvements	49							
CAPITAL EXPENSES TOTAL (lines 45-48)	F	600						600
TOTAL FARM EXPENSES (line E plus 44 plus F)	G	4229	1761	2637	1421	6686	917	17651
Principal Paid	50			4000				4000
Non-Farm Exp. & Investments	51							
Family Living	FL	600	1000	600	600	600	600	4000
TOTAL DOLLARS USED (lines G thru FL)	H	4829	2761	7237	2031	7286	1517	25661
Cash Difference for Month (D minus H)	I	-4429	-2361	-6837	-1631	-6886	-1117	-23261
Cash Balance Beginning of Month (line I last month)	J	300	300	300	300	300	300	1800
Cash Balance End of Month (J + I)	K	-4129	-2061	-6537	-1331	-6568	-817	-21461
		JAN.	FEB.	MAR.	APR.	MAY	JUNE	SUBTOTAL

FORM 26 **CASH FLOW** **FINANCIAL PLAN OR SUMMARY**

	LINE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
RECEIPTS								
Crop Sales Soybeans	1					5400		5400
Peanuts	2				26775			26775
Milo	3				4000			4000
	4							
Government Payments	5							
Custom Work	6				1500			1500
Dividends, Refunds, Resales	7							
Cash Rent, Other Farm	8							
Livestock Products (add columns 9-10)	10							
Misc. Receipts (add columns 11-14)	14							
Non-Breeding Livestock Raised (add cols. 15-16)	16			10122				10122
OPERATING SALES TOTAL	A			10122	32275	5400		47797
Livestock Purchd. for Resale Sales Tot (add cols.17-18)	18							
Breeding Livestock Sales (columns 19-21)	21			3168				3168
Mach., Equip., Bldgs. Sold	22							
CAPITAL SALES TOTAL (add lines 21-22)	B			3168				3168
TOTAL FARM RECEIPTS (line A plus 18 plus B)	C			13290	32275	5400		50965
MONEY BORROWED summary only	23							
NON-FARM RECEIPTS	24	400	400	400	400	400	400	4800
TOTAL DOLLARS AVAILABLE (add lines C plus 23 plus 24)	D	400	400	13690	32675	5800	400	55765
EXPENDITURES								
Hired Labor	25				91			252
Repairs	26	169	74	58	436	87	40	1933
Interest	27			1305	154	4941		7920
Feed	28	18	18	18	261	261	261	3294
Seed, Plants	29							3007
Fertilizer, Lime, Chemicals	30	338	1066	338	4830			12146
Machine Hire	31	938		656	1595			3826
Supplies	32							
Breeding Fees	33							
Misc. Expenses	34							
Vet. Medicine	35					141	263	825
Fuel and Oil	36	273	81	51	1946	97	29	3880
Storage	37							
Taxes	38						850	850
Insurance	39					400		400
Utilities	40							
Cash Rent Paid	41							800
Freight-Trucking	42							
Conservation Expense	43							
OPERATING EXPEND. TOTAL (lines 25-43)	E	1736	1239	2426	9313	5927	1443	39135
Livestock Purchd. for Resale Tot (add cols. 43-44)	45							
Breeding Stock Purchases	46							600
	47							
Mach. and Equip. Purchased	48							
Land and Bldg. Improvements	49							
CAPITAL EXPENSES TOTAL (lines 45-48)	F							600
TOTAL FARM EXPENSES (line E plus 44 plus F)	G	1736	1239	2426	9313	5927	1443	39735
Principal Paid	50					1194		5194
Non-Farm Exp. & Investments	51							
Family Living	FL	600	600	600	600	600	600	7600
TOTAL DOLLARS USED (lines G thru FL)	H	2336	1839	3026	9913	7711	2043	52529
Cash Difference for Month (D minus H)	I	-1936	-1439	+10664	+22762	-1911	-1643	+3236
Cash Balance Beginning of Month (line I last month)	J	300	300	300	2473	552	300	300
Cash Balance End of Month (J + I)	K	-1636	-1139	+10364	+20289	-1359	-1343	+2946
		JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL

FORM 27 **DATE** **NET WORTH STATEMENT: FARM AND NON-FARM**

	ASSETS		
1	Family Bank Balance		
2	Savings		
3	Stocks and Bonds (present value)		
4	Accounts and Notes Receivable		
5	Life Insurance (cash value)		
6	TOTAL NON-FARM CURRENT ASSETS (add 1 - 5)		
7	Auto and other Vehicles (family-share)		
8	Household and Other		
9	Boat, Camper, etc.		
10	Non-Farm Real Estate		
11	TOTAL NON-FARM ASSETS (add 6 - 10)		
12	Cash in Farm Account	300	300
13	Farm Accounts Receivable		
14	Swine, non-breeding (form 17 line 10)		
15	Beef, non-breeding (form 17, line 23)		
16	Dairy, non-breeding (form 17, line 35)		
17	Other, non-breeding (form 17, line 42)		
18	Purchased Feeds (form 18, line 7)	270	270
19	Stored Crops (form 18, line 18)	2625	3150
20	Growing Crops (form 18, line 21)		
21	Crop Supplies (form 18, line 36)		
22	Livestock Supplies (form 18, line 43)	250	270
23	Other Current Assets:		
24			
25	TOTAL FARM CURRENT ASSETS (add 12 - 24)	3445	3970
26	Swine, breeding (form 17, line 5)		
27	Beef, breeding (form 17, line 16)	24925	24925
28	Dairy, breeding (form 17, line 30)		
29	Other, breeding (form 17, line 39)		
30	Machinery & Equipment - book value (form 14)	48400	44560
31	TOTAL FARM INTERMEDIATE ASSETS (add 26 - 30)	73325	69485
32	Buildings & Improvements (form 20, line 11)	8250	7850
33	Land, Improvements (form 20, line 12)		
34	Land, original cost (form 19)	100250	100250
35	TOTAL FARM LONG TERM ASSETS (add 32 - 34)	108500	108100
36	TOTAL FARM ASSETS - book value (25 + 31 + 35)	185270	181555
	ADJUSTMENTS TO PRESENT VALUES		
37	Breeding Livestock Adjustment (form 16)		
38	Mach. and Equip. Adjustment (form 14)		
39	Buildings and Land Adjustment (form 20)		
40	Other:		
41	TOTAL ADJUSTMENTS (add 37-40)		
42	TOTAL FARM ASSETS - present values (36 + 41)		
43	TOTAL ASSETS - book values (11 + 36)		
44	TOTAL ASSETS - present values (11 + 42)		

	LIABILITIES AND NET WORTH		
45	Charge Accounts		
46			
47	Notes, portion due next year		
48	Mortgages, portion due next year		
49	Accrued Interest on above		
50	TOTAL NON-FARM CURRENT LIABILITIES (add 45 - 49)		
51	Notes, portion due after next year		
52			
53	Mortgages, portion due after next year		
54			
55	TOTAL NON-FARM LIABILITIES (add 50-54)		
56	NON-FARM NET WORTH (line 11 minus line 55)		
57	Short Term Farm Notes Payable (form 23, col. 9)		
58	Operating Loan	4000	1390
59			
60	Accounts Payable		
61			
62			
63	Portion of Int. & Long Term Debt due next year F 22		
64	Machinery Loan	4000	4000
65	Land Loan	1194	1302
66			
67	Accrued Liabilities (taxes, rent, interest)		
68	Interest	1964	1661
69	Income Tax	400	400
70	TOTAL FARM CURRENT LIABIALITIES (add 57-69)	11558	8753
71	Portion of Int. Term Debt due after next year F 22		
72	(breeding stock, machinery and equipment)		
73	Machinery Loan 4 Year @ 9%	12000	8000
74			
75		12000	8000
76	TOTAL FARM INTERMEDIATE LIABILITIES (add 71-75)		
77	Portion Lg. Term Debt due after next year F 22		
78	Land Loan 20 Yr. @ 9%	53112	52410
79			
80	TOTAL FARM LONG TERM LIABILITIES (add 77-79)	53112	52410
81	TOTAL FARM LIABILITIES (70 + 76 + 80)	77270	69163
82	FARM NET WORTH - book values (36 minus 81)	108000	112392
83	FARM NET WORTH - present values (42 minus 81)		
84	TOTAL LIABILITIES (55+81)		
85	TOTAL NET WORTH - book values (43 minus 84)		
86	TOTAL NET WORTH - present values (44 minus 84)		
87	NON-FARM NET WORTH - change for year (line 56)		
88	FARM NET WORTH - change for year (line 82)		4392
89	ADJUSTMENTS - change for year (line 41)		

FORM 28 19__ PROFIT AND LOSS STATEMENT AND ANALYSIS

	RECEIPTS		
1	Crop Sales (form 26 lines 1-4)	$ 36175	
2	Misc. Receipts (form 26, lines 5-14)	1500	
3	Raised Non-Bread Lvstk. Sales (f. 26, l. 15-16)	10122	
4	Lvstk. Purchased for Resale Sales (F. 26, l. 17-18)		
5	Capital Sales (form 26, line B)	3168	
A	TOTAL FARM RECEIPTS add lines 1-5 or form 26 line C		$ 50965
	EXPENDITURES		
6	Operating Expenditures (form 26, lines 25-42)	$ 39761	
7	Lvstk. Purchased for Resale (form 26, lines 44-45)		
8	Breeding Livestock (form 26, lines 46-47)	600	
9	Machinery & Equipment (form 26, line 48)		
10	Land & Building Imprv'ts (form 26, line 49)		
B	TOTAL FARM EXPENDITURES add lines 6-10		$ 40361
C	GROSS CASH INCOME line A - line B		$ 10604
	CHANGES IN INVENTORIES		
11	Livestock (form 17, line 44) ±	$	
12	Feed, Crops, Supplies (form 18, line 44) ±	+525	
13	Machinery & Equipment (form 14) ±	-3480	
14	Land & Building Improvements (form 20) ±	-400	
D	TOTAL INVENTORY CHANGE (lines 11 to 14)		$ -3715
15	Value Home Used Products (estimate)		
E	NET FARM INCOME (line C plus D plus 15)		6889
	BUSINESS ANALYSIS		
16	Interest Paid (form 26, line 27)		$
17	RETURN TO FARM CAPITAL, MANAGEMENT AND FAMILY LABOR (line E plus 16)		

	FARM LABOR	Hours	Value
18	Unpaid Operator		
19	Unpaid Family		
20	Hired - include paid family labor		
21	TOTAL FARM LABOR (add line 18 - 20)		$
22	Man Years Labor = total hours (line 21) ÷ 2400		man years
23	RETURN TO TOTAL FARM CAPITAL AND MANAGEMENT line 17 $_____ minus line 21 (value) $_____		$
24	RETURN TO MANAGEMENT line 23 minus (-) (.08 X avg. total farm assets) (form 27, line 42) $_____ - $_____		$
25	PER CENT RETURN ON TOTAL INVESTMENT (line 23) ÷ (Avg. Total Farm Assets) (form 27, line 42) $_____ ÷ $_____ x 100		%
	VALUE OF FARM PRODUCTION		
26	Operating Sales lines 1, 2, 3, 4,	$	
27	Gain or Loss on Purchased Items Resold ±		
28	Gain or Loss on Sale of Breeding Livestock ±		
29	Inventory Change of Feed, Crops, Sup. line 12 ±		
30	Inventory Change of Livestock line 11 ±		
31	Less Feed Purchased (form 26, line 28)		
32	Less Lvstk. Purchased for Resale line 7		
33	VALUE OF FARM PRODUCTION (add line 26-32)		$
34	VALUE OF FARM PRODUCTION PER MAN (line 33 _____ ÷ line 22 _____)		$
35	RATE OF CAPITAL TURNOVER Line 33 ÷ Avg. Total Farm Assets (form 27, line 42)		%

FINANCIAL STATEMENT ANALYSIS all figures from FORM 27

Current Ratio (Liquidity) line 25 ÷ line 70 = _____	Dollars of Working Capital line 25 minus line 70 $ ____	Total Assets: Liabilities Ratio (Solvency) line 36 ÷ line 81 _____	Debt: Worth Ratio (Leverage) line 81 ÷ line 82 _____

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INCOME TAX
UNIT XI

UNIT OBJECTIVE

After completion of this unit, the cooperator should be able to discuss purposes and uses of tax dollars. The cooperator also should be able to explain the importance of records, determine farm deductions and income, and analyze personal records to determine an estimate of income tax.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms and definitions associated with income tax.
2. Explain in a short paragraph uses of tax dollars.
3. Discuss cooperators tax liability.
4. Explain the importance and purpose of records in tax management.
5. Name advantages of good records in tax management.
6. Determine farm business deductions.
7. Determine farm income.
8. Explain using personal expenditures to locate possible personal deductions.
9. Discuss the importance of using a competent tax practitioner.
10. Use record books to reduce your taxable income.

INCOME TAX
UNIT XI

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

A. Provide cooperator with objective sheet.

B. Provide cooperator with information and assignment sheets.

C. Make transparencies.

D. Discuss unit and specific objectives.

E. Discuss information and assignment sheets.

F. Distribute *Farmers Tax Guide Internal Revenue Service*, Publication No. 225, to all cooperators.

G. Discuss advantages and disadvantages of using a tax practitioner compared to a Certified Public Accountant or tax attorney.

II. Instructional materials:

A. Objective sheet

B. Information sheet

C. Assignment Sheet #1--Use Record Books to Reduce Your Taxable Income

D. Answer to assignment Sheet

III. Unit references:

A. *Federal Tax Guide*. Chicago, Illinois: Commerce Clearing House, Inc., 1979.

B. Wheeler, Jon D. *Tax Desk Book for Farming and Ranching*. Englewood Cliffs, New Jersey: Institute for Business Planning, Inc., 1978.

C. *Farmers Tax Guide: 1979 Edition*. Publication 225, rev. Washington D.C.: Department of the Treasury, Internal Revenue Service, 1977.

D. Osburn, Donald D., and Schneeberger, Kenneth C. *Modern Agricultural Management*. Reston, Virginia: Prentice-Hall, Inc., 1978.

E. O'Byrne, John C. *Farm Income Tax Manual*. Indianapolis, Indiana: Allen Smith Company, Inc., 1975.

F. Weigle, R.N., et al. *Income Tax Management for Farmers.* Southern Farm Management Extension, Publication No. 17. Cooperative Extension Service, University of Georgia, College of Agriculture. N.D.

G. Maynard, Cecil D. 1978 *Farm Income Tax Management.* OSU Current Report No. 737. Stillwater: County Extension Offices, Oklahoma State University, 1978.

H. Hopkins, John A., and Barry, Peter J., and Baker, C.B. *Financial Management in Agriculture.* Danville, Illinois: The Interstate Printers and Publishers, Inc., 1973.

I. James, Sydney C., and Stoneberg, Everett. *Farm Accounting and Business Analysis.* Ames, Iowa: Iowa State University Press, 1976.

J. Leftwich, Richard H. *The Price System & Resources Allocation.* Hinsdale, Illinois: The Dryden Press, 1973.

K. McConnell, Campbell R. *Economics, Principals, Problems, and Policies.* New York, New York: McGraw-Hill Book Co., 1972.

INCOME TAX
UNIT X

INFORMATION SHEET

I. Terms and definitions

A. Tax Management--Year-round process in which a cooperator is constantly making decisions and those decisions can make a large impact on the amount of taxes which will have to be paid at years end. This is not just an end-of-the-year endeavor. Therefore, the purpose of tax management is not to minimize taxes because no taxes mean no ownership of property and assets; the real purpose is to maximize after tax income

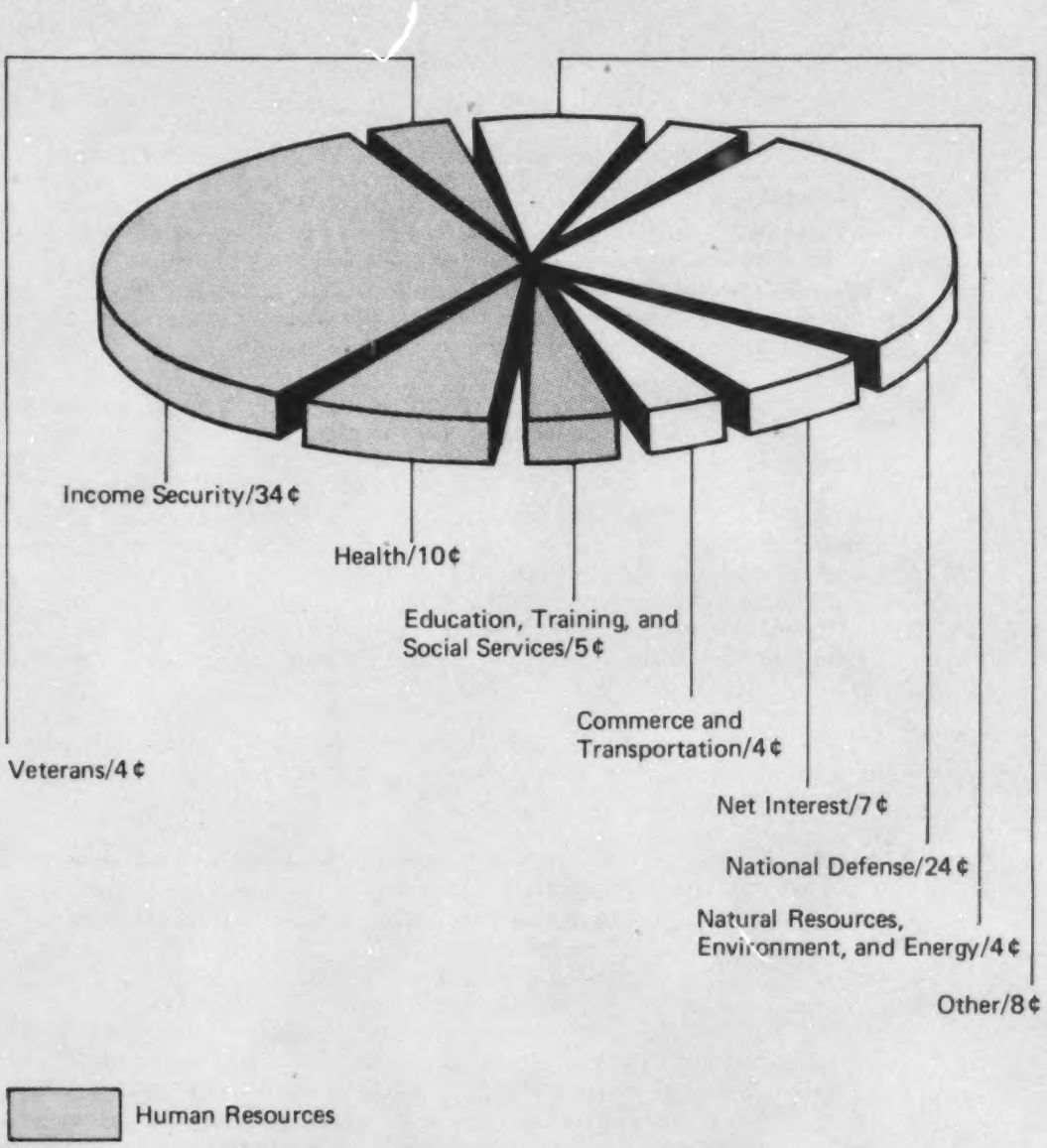
B. Farm--Land used for farming operations including dairy farms, fish farms, fruit farms, nurseries, orchards, oyster farms, plantations, poultry farms, ranches, ranges, stock farms, and truck farms

C. Farmer--An individual, partnership, or corporation that cultivates, operates, or manages a farm for gain or profit either as an owner or tenant. An individual must assume risks associated with farming; therefore, an assistant or a manager employed on a straight salary basis would not be included under the IRS definition of farmer. However, an owner or tenant is a farmer when the farm is rented on shares, or a farm manager is compensated based on production

II. Uses of tax dollars--Spending in any one year is usually the result of decisions made in previous years. The combination of budget expenditures over time give an indication of national priorities

Examples: Defense costs of the Federal Budget have dropped from 44% in 1967 to 24% in 1977. For fiscal year 1977 which began October 1, 1976 and ended September 30, 1977, Federal outlays were $401.9 billion, and receipts were $356.9 billion, leaving a deficit of $45 billion. Income and social insurance taxes are the largest sources of Federal revenues. In 1977, individuals paid $156.7 billion in income taxes and corporations paid $54.9 billion. Social Security, other insurance retirement taxes, and contributions were $108.7 billion. In 1977, $5.1 billion dollars was allocated to agriculture. One cent of each dollar spent was used for farm income stabilization, agriculture research, and food inspection

INFORMATION SHEET



Courtesy Your Federal Income Tax 1978 Edition, Department of the Treasury, Internal Revenue Service, Publication 17.

INFORMATION SHEET

III. Cooperators tax liability

A. Income tax is progressive in nature; that is, it increases proportionately to income, thus affecting the ability to accumulate capital. The higher a cooperators taxable income becomes, the higher the rate at which that income is taxed. This is a method of achieving greater equity in distribution of income

B. Higher rates apply to increments in income and not the total amount. Although the percentage of each increase in income earned paid rises sharply, the average tax rate on total income is considerably less

C. Because of progressive tax rates, the less income fluctutates from year to year, the less income tax a cooperator will have to pay over a period of years

D. Income taxes are imposed on an individual's taxable income through a system of graduated tax rates. These individual rates range from a minimum of 14% to a maximum of 70%. There are five different rate schedules. Cooperator status will determine which table is used. There are tables for unmarried individuals, married individuals filing joint returns, surviving spouses, married individuals filing joint returns, heads of households, and estates and trusts.

IV. Importance and purpose of records in tax management--Records are a necessity to successful tax management. Records enable the farmer to determine approximate income any time during the year. They provide the foundation for making good business decisions that increase net income after taxes

V. Advantages of good records in tax management

A. Acts as a basis for Social Security payments

B. Acts as a basis for lease and business agreements

C. Determines net farm income

D. Determines financial progress

E. Determines return to resources

F. Identifies strengths and weaknesses in the business

G. Aids is making decisions for major changes

H. Provides a history of farming operations

INFORMATION SHEET

VI. Farm business deductions--Deductible farm expenses are ordinary and necessary costs of operating a farm. All deductible expenses should be taken to reduce the amount of taxes that will have to be paid

A. Losses are deductible if incurred in the operation of the farm. If a cooperator operates a farm or ranch for profit in addition to another trade or business, yet incurs a loss from farming, the amount of loss incurred may be deducted from gross income received from all sources

B. Wages paid for regular farm labor, piece work, contract labor, and other forms of labor hired to perform farming operations are deductible. The actual cost of boarding hired held is deductible. If transfering a capital asset or an asset used in your business to an employee in payment for work done, market value at the date of transfer is deductible. Payment of wages in the form of partnership interests or corporation stock can help in the transfer of a farm between generations

C. Repairs and maintenance--Amounts spent for supplies necessary to maintain cooperator assets used in the farm business are deductible. However, they must not add to the value or prolong the life of the property. If they do, they become capital expenditures

Example: If the barn roof is repaired, the cost is deductible. If the barn roof is replaced, it's a capital expenditure

D. Interest expenses--Interest paid is deductible for personal as well as business assets. Interest paid on farm loans is deductible on Schedule F. Interest paid on personal loans is deductible on Schedule A

(NOTE: Income tax forms will be covered later in another unit.)

E. Taxes--Taxes that are deductible as a farm expense are the real estate and personal property taxes on the farm businesses assets. These include taxes on farm equipment, animals, farm land, and farm buildings, and the Social Security tax matching funds. State and Federal taxes are not deductible as a farm business expense. However, state income tax on business profits is treated as a business expense in determining a net operating loss. State or local general sales taxes need not be shown separately; they may be included as a part of the cost of the item in question. Federal-Use-Tax on highway motor vehicles that are paid on a truck or truck-tractor in a cooperators farming business are deductible expenses

F. Feed expenses--Cost of feed for raising animals is a deductible expense. A cash basis cooperator may achieve a deferral of the current years income by purchasing feed at the end of one year for use in the next year. This deferral can be made more or less permanent by continuing to buy feed in advance each year. The IRS had indicated that an advance feed deduction is allowable if the following tests are met:

1. Advance feed expenditures are a payment and not a deposit

INFORMATION SHEET

2. Payment is for a business purpose

3. Deduction does not result in a material distortion of income

G. Insurance--Premiums on fire, storm, crop, theft, or in general, insurance on the farm business or assets, are deductible as a farm business expense. If a cooperator carries health or accident insurance on employees, those premiums are deductible

H. Commodity futures contracts--Futures contracts entered into solely for protection against the risk of unfavorable price fluctuations are a form of business insurance and are considered a hedge. Any loss sustained from a closed hedging futures transaction is deductible as a normal and ordinary business expense. Any profit is treated as normal income. If a cooperator trades futures in their range of production, the transactions are generally considered hedges. If futures are traded outside the cooperators range of production, one would be considered to be speculating

I. Rent--If rent is paid in cash, it is deductible; but if rent is paid in crop shares, it is not deductible. Costs of raising crops have previously been deducted as a business expense

J. Fertilizer and lime--Cooperators may elect to deduct current expenditures for fertilizer, lime, ground limestone, marl or other materials used for enrichment, neutralization, or conditioning land used in farming

K. Soil and water conservation--Cooperators may elect to deduct expenditures for soil or water conservation if it relates to the farming business, or is used for prevention of erosion of land used in farming. Without the election, expenses would have to be capitalized. Deductions are limited to 25% of gross income from farming during the taxable year

L. Traveling expenses--Expenses incurred in connection with the farm business are deductible

M. Miscellaneous deductible expenses

Examples: Farm organization dues, stamps and stationery, advertising, ginning, "farm magazines," livestock fees, tying materials, containers, trucking, accounting fees, insect spray and dusts, account books, litter bedding

INFORMATION SHEET

VII. Farm income

A. On a cash basis, gross income includes the amount of cash or market value of merchandise or other property received from the sale or exchange of livestock and produce that were raised during the taxable year or in prior years. Income also includes profits from the sale of livestock or other purchased items, and total receipts from agricultural program payments, breeding fees, commodity credit loans, crop insurance, machine work proceeds, patronage dividends, rebates or refunds, reimbursements for animals destroyed by government order and rent received in crop shares if in money

B. Cooperators using the accrual method of reporting are required to use inventories taken at the beginning and ending of the year. Net profit on the accrual method is calculated by taking total sales less cost of livestock or crops sold plus miscellaneous farm receipts and income less expense incurred during the year including depreciation. Although the cost of feed and other crop and livestock raising expenses are deductible; the deductions for such raising costs are offset by inclusion in the closing inventories of crops and animals raised during the year. Accrual basis cooperator must include payment in kind certificates received under the cotton equilization program when payment in kind certificates are approved by the Commodity Credit Corporation

C. Wheat stabilization and feed grain program--These payments are taxable on the cash basis when received or when made available by the Agricultural Stabilization and Conservation Service Committee, which ever is earlier. If a cooperator has been reporting these items in the years of actual rather than constructive, receipt, and one year's income reflects payment for two crop years, the cooperator may be allowed, with the consent of the Commissioner, to report a pro-rata portion of one years payment for each of ten taxable years, beginning with the year which reflects payments for two crop years

D. Insurance--If a cooperator receives insurance proceeds because crops have been destroyed, the crops are considered involuntarily converted. Unless the cooperator purchases a replacement crop with the proceeds, the insurance will be taxable in the year received

E. Forced sale of livestock due to drought--Income from forced sales of livestock due to drought conditions in an area designated for assistance by the Federal government may be partially deferred until the next tax year. If the cooperator desires it, that individual may defer until the next year, income received from the forced sale of livestock (other than that held for draft, dairy, breeding, or sporting purposes) in excess of the number sold if following usual business practices

F. Farm products used by cooperator or family--Value of farm products consumed by a cooperator and family need not be reported as income. However, deductible costs of raising these items are not allowable as deductions

INFORMATION SHEET

G. Commodity credit loans--If a cooperator obtains a crop loan from the Commodity Credit Corporation, that individual may elect to include the amount of the loan as income in the year in which the loan proceeds are actually received. However, a cooperator who has not made this election derives income in the taxable year when the commodity is sold. If election is made, a certificate of interest issued by the Commodity Credit Corporation to the cooperator is not a loan and is not includible in gross income until the amounts authorized by the certificate are actually disbursed to the cooperator. If election is not made, the receipt of the funds upon presentation of a certificate of interest to a bank amounts to a receipt of loan proceeds and not a receipt of income. Once election is made to treat a commodity credit loan as income in the year in which received, the cooperator must continue to follow this method for succeeding years unless permission is secured from the Commissioner to change to a different method of accounting

H. Patronage dividends--All dividends that are deductible by cooperatives are to be included in gross income of the cooperator. If the co-op is tax exempt, this includes both patronage and non-patronage dividends. If the co-op is nonexempt, only patronage dividends are included

I. Agricultural products sold subject to payment in the following year--A cash-basis taxpayer may have to include certain payments in income even though not actually received, if they are set aside and available upon request. Cooperatives may not postpone tax on the gain until the following year by requesting that payment be deferred. Tax liability may be postponed if the cooperator and the buyer actually contract that payment be made after the close of the year

Example: A cash-basis cooperator who sells wheat to an elevator in one year under contract calling for payments in the next year does not have to report the proceeds of the sale until received. This contract must be entered into at "arms length", or it may be questioned as an attempt at tax avoidance

J. Mineral rights--Rights to a depletion allowance depend on:

1. Does the cooperator have an economic interest in the mineral deposits in place or standing timber?

2. Actual production

The right to share in oil produced does not support a depletion deduction until there is income from production. Although the percentage depletion rate is applied against the gross income from production, the maximum depletion deduction is limited to 50% of the taxable income from the property. Effective January 1, 1975, the percentage depletion allowance of 22% was repealed. There are three exemptions from this repeal:

INFORMATION SHEET

1. Regulated natural gas

2. Natural gas sold under a fixed contract

3. Any geothermal deposit in the United States that is determined to be a gas well

The exceptions are still subject to the 22% depletion rate

VIII. Using personal expenditures to locate possible personal deductions

A. Personal exemption--Each personal exemption is worth $1,000. A cooperator is always entitled to at least one exemption. A cooperator also gets exemptions for a spouse, if filing a joint return. Cooperators are also entitled to one exemption for each child, including step children, legally adopted children and foster children

Example: The child must receive more than half of their support from you, or had gross income of less than $750, or had either not reached the age of 19 or was a full-time student

An individual is also entitled to exemptions for dependents who are other than children

Example: Individuals must have received less than $750 gross income or received more than half of their support from the cooperator

B. Taxes--The following taxes are deductible on Schedule A (Form 1040) in the year paid, if using the cash method or in the year incurred using the accrual method

1. Real estate and personal property taxes on a personal residence and its furnishings

2. State, local, or foreign income taxes

3. State and local sales tax on personal items

C. Interest--Most of a cooperators interest expense probably will be directly connected with the business of farming and deductible on Schedule F. However, interest paid on the mortgage on a residence, interest on a personal loan, interest paid on income tax deficiencies, and any other interest that is not attributable to farming or to rental property, should be listed in Schedule A (Form 1040)

INFORMATION SHEET

D. Medical and dental expenses--May be deductible but are subject to certain restrictions. The amount paid during the year and which was not recovered from insurance or any other sources, for medical and dental expenses for yourself, your spouse or any dependent are deductible. There are limitations on the amounts you may deduct

Examples: Medical and dental expenses are deductible only to the extent that they exceed 3% of adjusted gross income

Medical insurance costs are an exception to the above limitation. Individuals may deduct one-half of medical insurance premiums up to a maximum of S150. The balance is then deductible as a medical expense, subject to the 3% limitation. Limits on medicines and drugs are 1% of adjusted gross income

E. Contributions--Cooperators may deduct only contributions or gifts actually paid in cash or property during the tax year. Cooperators may deduct charitable gifts to most religious, educational, charitable, scientific, and literary organizations. Gifts to political organizations or social clubs may not be deducted. Contributions for public office are not deductible as a charitable contribution. There are limits on the amounts deductible

Examples: In general, contributions of money and ordinary income property to most charities is limited to 50% of adjusted gross income

Contributions to certain organizations and use of any charitable organizations are limited to 20% of gross income. An organization will be able to tell an individual whether or not it qualifies for the 50% limitation

F. Gifts of property--Donated to religious, educational, charitable, scientific, or literary organizations, deductions are allowed as a contribution. The value used in this deduction is fair market value at the time of the gift. Remember that when claiming these type deductions cooperators will need to furnish certain information to support these deductions

IX. Importance of using a competent tax practitioner

A. Taxes, like farm expenses, can be cut back by efficient management and can result in more cash available for family living and capital expenditures. The longer a cooperator can legally delay paying taxes, the greater will be the cooperators cash flow for business and personal use. As a good tax manager, the cooperator and tax advisor will find complete and accurate records indispensable

B. Communication is important between a cooperator and tax practitioner. The tax advisor cannot read a cooperators mind, but on the other hand, a cooperator should be familiar enough with tax procedures to know when to discuss an upcoming situation with the tax advisor

INFORMATION SHEET

C. Remember, any information given to a tax practitioner is confidential. Do not be afraid to discuss all transactions taken in the year. Talk to a tax adviser early. Do not wait until after the tax year closes and it is getting near the filing date to talk with the tax expert. There are probably other clients who also need help at this time, and proper analysis may not be possible because of time constraints.

INCOME TAX MANAGEMENT
UNIT XI

ASSIGNMENT SHEET #1-USE RECORD BOOKS TO REDUCE YOUR TAXABLE INCOME

By estimating your income taxes you can make sound business decisions before your tax filing period is due. Decisions can be made which avoid wide fluctuations in income and will help you reduce your tax obligation. In most cases, your tax estimate should be made in late October or early November. Most tax decisions must be made prior to the end of the year.

Here are a few tax reporting hints that require good records to be effective:

1. Be sure that CCC loans are not counted as income twice (in one year when borrowed and next year when the crop is sold). Good records will prevent this

2. If using the cost method, deduct the cost of purchased livestock lost, strayed, stolen, or died during the year

3. Deduct the farm share of all auto and truck expenses

4. Take allowable depreciation on improvements

   Examples: Machinery, equipment, and purchased breeding, dairy, draft animals

5. Keep records to ensure deduction of easily overlooked items

   Examples: Farm magazines, bank service charges, portions of dwelling used for farm business

6. Itemize on bank deposits all gifts, borrowing, savings bonds cashed etc.; this is so the IRS will not consider these taxable income

7. Keep records on all medical, dental and hospital bills, including premiums for accident and health insurance

8. Establish a charge at a hardware store or elevator, or other places where considerable business is done during the year. Pay the account by check upon receipt of monthly statements. This prevents the omission of many small expenses that otherwise might be paid by cash and the receipt lost

9. Pay bills by check when possible. Record all cash expenditures at once in an account book. Always get receipts when paying cash

10. Keep all "paid" receipts, invoices, canceled checks, etc., for at least 5 years, including checks for payment of income taxes. Receipts for purchase of items on investment credit should be kept for 8 years (or until property is disposed of), as evidence of purchase. For improvements, these vouchers should be kept as long as the property is held

ASSIGNMENT SHEET #1

Using skills developed in the unit, the cooperator should be able to work the following income tax estimate sheet:

During this current tax year, you sold $40,000 worth of cattle that you raised out of your herd. You sold 7,500 bushels of wheat for $3.00 per bushel. You also purchased $10,000 worth of feeder cattle and resold them later in the year for $17,000. You incurred expenses of $1,000 for labor hired to help you get your wheat harvested. You spent $2,000 for repairs on machinery and equipment during the year. Veterinary bills for the year totaled $1,200. You paid $1,500 in rent on pasture this year. Seed costs were $1,600. You also applied fertilizer on your wheat at a cost of $5,000. You paid $500 in trucking costs to get your cattle to market. Feed costs for the cattle were $15,000. You also spent $1,500 on gasoline for your machinery around the farm. Your depreciation has been calculated at $5,200 this year. You did not sell any of your machinery this year. You are married and have 3 children. You have calculated deductions for a business trip you took to Houston for a livestock show at $700. You belong to several young farmer organizations and breeding associations; dues and membership fees come to $100. You calculated you spent $300 on small hand tools with a useful life of less than one year. You also bought a new tractor this year for $15,000 and it is calculated to have a useful life of 10 years. This tractor is eligible for investment credit.

Use the methods discussed earlier in this unit to calculate your estimated income tax on the following page.

ASSIGNMENT SHEET #1

Income Tax Worksheet

I. Cooperator's Name _____ SS# _____

II. Spouse's Name _____ SS# _____

III. Exemptions:

IV. FARM INCOME AND EXPENSES

A. Income

1. Sales of Purchased Items

	Description	Amount of Sale	Cost	Profit or Loss
(1)	Cattle	$_____	$_____	$_____
(2)	Hogs	_____	_____	_____
(3)		_____	_____	_____
(4)		_____	_____	_____

*TOTAL PROFIT OR LOSS

2. Sales of Raised Items

	Kind	Amount		Kind	Amount
(1)	Cattle	$_____	(6)		$_____
(2)	Calves	_____	(7)		_____
(3)	Sheep	_____	(8)		_____
(4)	Swine	_____	(9)		_____
(5)		_____	(10)		_____

*TOTAL RAISED SALES

3. Other Farm Income

	Kind	Amount		Kind	Amount
(1)	Machine Work	$_____	(5)	CCC Loans under Election (or Forfeited)	$_____
(2)	Patronage Divd.	_____			
(3)	Non-Patronage	_____			
(4)	Ag. Program Pmts.		(6)	Fed. Gasoline Tax Refund	_____
	(a) Cash	_____	(7)	State Gasoline Refund	_____
	(b) Materials and Services	_____	(8)	Other	_____
			(9)		_____
			(10)		_____

*TOTAL OTHER

GROSS PROFITS

ASSIGNMENT SHEET #1

B. Expenses

Kind	Amount	Kind	Amount
(1) Hired Labor	$_____	(12) Gas, oil, fuel	$_____
(2) Repairs, maint.	_____	(13) Storage	_____
(3) Interest	_____	(14) Taxes	_____
(4) Rent of farm, past.	_____	(15) Insurance	_____
(5) Feed Purchased	_____	(16) Utilities	_____
(6) Seeds, plants, pchd.	_____	(17) Freight, Trucking	_____
(7) Fert., lime, chem.	_____	(18) Conserv. Exps.	_____
(8) Machine Hire	_____	(19) Land Clearing	_____
(9) Supplies pchd.	_____	(20) Benefit plans	_____
(10) Breeding Fees	_____	(21)	_____
(11) Vet Medicine	_____	(22)	_____
		(23)	_____

TOTAL CASH EXPENSES

C. Depreciation Schedule

1. Items Purchased

a. Date b. Description c. Total Purchased Price

2. Items traded

a. Date b. New Item c. Old Item d. Total Boot Paid

3. Items Sold

a. Date b. Description c. Total Sale Price

4. Sale of Livestock that Qualify for Capital Gain

ASSIGNMENT SHEET #1

V. NON-FARM INCOME

1. Wages (W-2 Forms)
   a. Gross Wages _____
   b. Federal W/H _____
   c. State W/H _____
   d. FICA W/H _____

2. Interest Income

a. Source	b. Amount
(1)	_____
(2)	_____
(3)	_____

3. Dividend Income

a. Source	b. Amount
(1)	_____
(2)	_____
(3)	_____

4. State and Local Income Tax Refunds _____
5. Alimony Received _____
6. Pension and Annuity Income _____
7. Rent and Royalty Income

	a. Kind	Total b. Amount	Depreciation c. or Depletion	Other d. Expenses
(1)				
(2)				
(3)				
(4)				

8. Other Income

a. Kind	b. Amount	a. Kind	b. Amount
(1)		(3)	
(2)		(4)	

VI. ADJUSTMENTS TO INCOME

(Moving expenses, employee business expenses, payments to IRA or Keogh, interest penalty, alimony paid.)

1. 3.
2. 4.

ASSIGNMENT SHEET #1

VIII. ITEMIZED DEDUCTIONS (PERSONAL)

1. Medical and Dental Expense
   a. Insurance Premiums _____
   b. Medicine and Drugs _____
   c. Doctors, nurses, dentists, etc. _____
   d. Hospitals _____
   e. Other _____
   f. _____

2. Taxes
   a. State and local income _____ d. General Sales _____
   b. Real Estate _____ e. Personal Property _____
   c. State & Local Gasoline _____ f. Other _____

3. Interest
   a. Home Mortgage _____
   b. Credit and charge cards _____
   c. Other _____
   d. _____

4. Contributions
   a. Cash contributions w/written evidence _____
   b. Other (list)

5. Casualty or Theft Loss (explanation)

6. Misc. Deductions
   a. Union dues _____
   b. Other _____

VIII. CREDITS - WILL I QUALIFY FOR

a. Contributions to Candidates for Public Office _____
b. Child and Dependent Care _____
c. Residential Energy _____
d. Federal Fuel Tax Credit: Type of Use _____ Fuel _____ Gallons
   1. Farming
   2.
e. Other _____

IX. OTHER INFORMATION

ASSIGNMENT SHEET #1

INCOME TAX ESTIMATE WORKSHEET

RECEIPTS:		ESTIMATED AMOUNTS
Sales of products raised* and miscellaneous receipts:		
Cattle, hogs, sheep and wool, etc.		$_____
Poultry, eggs and dairy products		$_____
All crops sales		$_____
Custom work, prorations and refunds agriculture program payments		$_____
Total sales and other farm income	(1)	$_____
Sales of purchased market livestock†		$_____
Purchase cost (subtract)‡		$_____
Gross profits on sales of purchased livestock†	(2)	$_____
Gross farm profits (Item 1 + 2)	(3)	$_____

FARM EXPENSES:			
Labor hired	$_____	Veterinary Medicine	$_____
Repairs, maintenance	_____	Gasoline, fuel, oil	$_____
Interest	_____	Storage, warehousing	_____
Rent of farm, pasture	_____	Taxes	_____
Feed purchased	_____	Insurance	_____
Seed, plants purchased	_____	Utilities	_____
Fertilizers, lime	_____	Freight, trucking	_____
Machine hire	_____	Conservation expenses	_____
Supplies purchased	_____	Other Business, Fees	_____
Breeding fees	_____	Other	_____

Total cash farm expenses	(4)	$_____
Depreciation on machinery improvements, dairy and breeding stock	(5)	$_____
Total deductions (Item 4 + 5)	(6)	$_____
Self employment farm income (Item 3 less item 6)‡	(7)	$_____
Net taxable gain from Schedule D (Sales of dairy and breeding stock, machinery and other capital exchanges	(8)	$_____
Taxable non-farm income	(9)	$_____
Adjusted gross income (Item 7 + 8 + 9)	(10)	$_____
Less $_____: Excess itemized deductions** ($1,000 x _____ personal exemptions)***		
Total non-business deductions and exemptions	(11)	$_____
Taxable income (Item 10 less item 11)	(12)	$_____
Estimated income tax (calculated from applicable sales tax computation table or rates)	(13)	$_____
Estimated self-employment tax (Item 7 x current rate)	(14)	$_____
TOTAL TAX (Item 13 + 14)	(15)	$_____
Less Credits: allowable investment credit and carryover, gas tax, income tax withheld and estimated tax paid	(16)	$_____
Estimated tax due (Item 15 less item 16)	(17)	$_____
ESTIMATED STATE INCOME TAX DUE	(18)	$_____

* For accrual method include sales of all livestock.

** Use itemized deductions if larger.

*** Exemptions for 1979, see current tax regulations for subsequent years.

† Omit for accrual method.

‡ For accrual method adjust for change in inventory and new livestock purchases.

Courtesy of and adapted from *Income Tax Management for Farmers.* Southern Farm Management Extension Publication No. 17. Cooperative Extension Service. University of Georgia College of Agriculture.

ASSIGNMENT SHEET #1

Income Tax Worksheet

I. Cooperator's Name _____ SS# _____

II. Spouse's Name _____ SS# _____

III. Exemptions:

IV. FARM INCOME AND EXPENSES

A. Income

1. Sales of Purchased Items

	Description	Amount of Sale	Cost	Profit or Loss
(1)	Cattle	$_____	$_____	$_____
(2)	Hogs	_____	_____	_____
(3)		_____	_____	_____
(4)		_____	_____	_____

*TOTAL PROFIT OR LOSS

2. Sales of Raised Items

	Kind	Amount		Kind	Amount
(1)	Cattle	$_____	(6)		$_____
(2)	Calves	_____	(7)		_____
(3)	Sheep	_____	(8)		_____
(4)	Swine	_____	(9)		_____
(5)		_____	(10)		_____

*TOTAL RAISED SALES

3. Other Farm Income

	Kind	Amount		Kind	Amount
(1)	Machine Work	$_____	(5)	CCC Loans under Election (or Forfeited)	$_____
(2)	Patronage Divd.	_____			
(3)	Non-Patronage	_____			
(4)	Ag. Program Pmts.		(6)	Fed. Gasoline Tax Refund	_____
	(a) Cash	_____	(7)	State Gasoline Refund	_____
	(b) Materials and Services	_____	(8)	Other	_____
			(9)		_____
			(10)		_____

*TOTAL OTHER

GROSS PROFITS

ASSIGNMENT SHEET #1

B. Expenses

Kind	Amount	Kind	Amount
(1) Hired Labor	$_____	(12) Gas, oil, fuel	$_____
(2) Repairs, maint.	_____	(13) Storage	_____
(3) Interest	_____	(14) Taxes	_____
(4) Rent of farm, past.	_____	(15) Insurance	_____
(5) Feed Purchased	_____	(16) Utilities	_____
(6) Seeds, plants, pchd.	_____	(17) Freight, Trucking	_____
(7) Fert., lime, chem.	_____	(18) Conserv. Exps.	_____
(8) Machine Hire	_____	(19) Land Clearing	_____
(9) Supplies pchd.	_____	(20) Benefit plans	_____
(10) Breeding Fees	_____	(21)	_____
(11) Vet Medicine	_____	(22)	_____
		(23)	_____

TOTAL CASH EXPENSES

C. Depreciation Schedule

1. Items Purchased

   a. Date b. Description c. Total Purchased Price

2. Items traded

   a. Date b. New Item c. Old Item d. Total Boot Paid

3. Items Sold

   a. Date b. Description c. Total Sale Price

4. Sale of Livestock that Qualify for Capital Gain

ASSIGNMENT SHEET #1

V. NON-FARM INCOME

1. Wages (W-2 Forms)
   a. Gross Wages _____
   b. Federal W/H _____
   c. State W/H _____
   d. FICA W/H _____

2. Interest Income

a. Source	b. Amount
(1)	_____
(2)	_____
(3)	_____

3. Dividend Income

a. Source	b. Amount
(1)	_____
(2)	_____
(3)	_____

4. State and Local Income Tax Refunds _____
5. Alimony Received _____
6. Rension and Annuity Income _____
7. Rent and Royalty Income

	a. Kind	Total b. Amount	Depreciation c. or Depletion	Other d. Expenses
(1)				
(2)				
(3)				
(4)				

8. Other Income

a. Kind	b. Amount	a. Kind	b. Amount
(1)		(3)	
(2)		(4)	

VI. ADJUSTMENTS TO INCOME

(Moving expenses, employee business expenses, payments to IRA or Keogh, interest penalty, alimony paid.)

1. 3.
2. 4.

ASSIGNMENT SHEET #1

VIII. ITEMIZED DEDUCTIONS (PERSONAL)

1. Medical and Dental Expense
   a. Insurance Premiums _____
   b. Medicine and Drugs _____
   c. Doctors, nurses, dentists, etc. _____
   d. Hospitals _____
   e. Other _____
   f. _____

2. Taxes
   a. State and local income _____ d. General Sales _____
   b. Real Estate _____ e. Personal Property _____
   c. State & Local Gasoline _____ f. Other _____

3. Interest
   a. Home Mortgage _____
   b. Credit and charge cards _____
   c. Other _____
   d. _____

4. Contributions
   a. Cash contributions w/written evidence _____
   b. Other (list)

5. Casualty or Theft Loss (explanation)

6. Misc. Deductions
   a. Union dues _____
   b. Other _____

VIII. CREDITS - WILL I QUALIFY FOR

a. Contributions to Candidates for Public Office _____
b. Child and Dependent Care _____
c. Residential Energy _____
d. Federal Fuel Tax Credit: Type of Use _____ Fuel _____ Gallons
   1. Farming
   2.
e. Other _____

IX. OTHER INFORMATION

INCOME TAX ESTIMATE WORKSHEET

RECEIPTS:		ESTIMATED AMOUNTS
Sales of products raised* and miscellaneous receipts:		
Cattle, hogs, sheep and wool, etc.		$_____
Poultry, eggs and dairy products		$_____
All crops sales		$_____
Custom work, prorations and refunds agriculture program payments		$_____
Total sales and other farm income	(1)	$_____
Sales of purchased market livestock†		$_____
Purchase cost (subtract)†		$_____
Gross profits on sales of purchased livestock†	(2)	$_____
Gross farm profits (Item 1 + 2)	(3)	$_____

FARM EXPENSES:			
Labor hired	$_____	Veterinary Medicine	$_____
Repairs, maintenance	_____	Gasoline, fuel, oil	$_____
Interest	_____	Storage, warehousing	_____
Rent of farm, pasture	_____	Taxes	_____
Feed purchased	_____	Insurance	_____
Seed, plants purchased	_____	Utilities	_____
Fertilizers, lime	_____	Freight, trucking	_____
Machine hire	_____	Conservation expenses	_____
Supplies purchased	_____	Other Business, Fees	_____
Breeding fees	_____	Other	_____

Total cash farm expenses	(4)	$_____
Depreciation on machinery improvements, dairy and breeding stock	(5)	$_____
Total deductions (Item 4 + 5)	(6)	$_____
Self employment farm income (Item 3 less item 6)‡	(7)	$_____
Net taxable gain from Schedule D (Sales of dairy and breeding stock, machinery and other capital exchanges	(8)	$_____
Taxable non-farm income	(9)	$_____
Adjusted gross income (Item 7 + 8 + 9)	(10)	$_____
Less $_____: Excess itemized deductions** ($1,000 x _____ personal exemptions)***		
Total non-business deductions and exemptions	(11)	$_____
Taxable income (Item 10 less item 11)	(12)	$_____
Estimated income tax (calculated from applicable sales tax computation table or rates)	(13)	$_____
Estimated self-employment tax (Item 7 x current rate)	(14)	$_____
TOTAL TAX (Item 13 + 14)	(15)	$_____
Less Credits: allowable investment credit and carryover, gas tax, income tax withheld and estimated tax paid	(16)	$_____
Estimated tax due (Item 15 less item 16)	(17)	$_____
ESTIMATED TAX DUE	(18)	$_____

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* For accrual method include sales of all livestock.

** Use itemized deductions if larger.

*** Exemptions for 1979, see current tax regulations for subsequent years.

† Omit for accrual method.

‡ For accrual method adjust for change in inventory and new livestock purchases.

Courtesy of and adapted from *Income Tax Management for Farmers.* Southern Farm Management Extension Publication No. 17. Cooperative Extension Service. University of Georgia College of Agriculture.

ASSIGNMENT SHEET #1

Income Tax Worksheet

I. Cooperator's Name _____ SS# _____

II. Spouse's Name _____ SS# _____

III. Exemptions:

IV. FARM INCOME AND EXPENSES

A. Income

1. Sales of Purchased Items

	Description	Amount of Sale	Cost	Profit or Loss
(1)	Cattle	$_____	$_____	$_____
(2)	Hogs	_____	_____	_____
(3)		_____	_____	_____
(4)		_____	_____	_____

*TOTAL PROFIT OR LOSS

2. Sales of Raised Items

	Kind	Amount		Kind	Amount
(1)	Cattle	$_____	(6)		$_____
(2)	Calves	_____	(7)		_____
(3)	Sheep	_____	(8)		_____
(4)	Swine	_____	(9)		_____
(5)		_____	(10)		_____

*TOTAL RAISED SALES

3. Other Farm Income

	Kind	Amount		Kind	Amount
(1)	Machine Work	$_____	(5)	CCC Loans under Election (or Forfeited)	$_____
(2)	Patronage Divd.	_____			
(3)	Non-Patronage	_____			
(4)	Ag. Program Pmts.		(6)	Fed. Gasoline Tax Refund	_____
	(a) Cash	_____	(7)	State Gasoline Refund	_____
	(b) Materials and Services	_____	(8)	Other	_____
			(9)		_____
			(10)		_____

*TOTAL OTHER

GROSS PROFITS

ASSIGNMENT SHEET #1

B. Expenses

Kind	Amount	Kind	Amount
(1) Hired Labor	$_____	(12) Gas, oil, fuel	$_____
(2) Repairs, maint.	_____	(13) Storage	_____
(3) Interest	_____	(14) Taxes	_____
(4) Rent of farm, past.	_____	(15) Insurance	_____
(5) Feed Purchased	_____	(16) Utilities	_____
(6) Seeds, plants, pchd.	_____	(17) Freight, Trucking	_____
(7) Fert., lime, chem.	_____	(18) Conserv. Exps.	_____
(8) Machine Hire	_____	(19) Land Clearing	_____
(9) Supplies pchd.	_____	(20) Benefit plans	_____
(10) Breeding Fees	_____	(21)	_____
(11) Vet Medicine	_____	(22)	_____
		(23)	_____

TOTAL CASH EXPENSES

C. Depreciation Schedule

1. Items Purchased

   a. Date b. Description c. Total Purchased Price

2. Items traded

   a. Date b. New Item c. Old Item d. Total Boot Paid

3. Items Sold

   a. Date b. Description c. Total Sale Price

4. Sale of Livestock that Qualify for Capital Gain

ASSIGNMENT SHEET #1

V. NON-FARM INCOME

1. Wages (W-2 Forms)
   a. Gross Wages _____
   b. Federal W/H _____
   c. State W/H _____
   d. FICA W/H _____

2. Interest Income

a. Source	b. Amount
(1)	_____
(2)	_____
(3)	_____

3. Dividend Income

a. Source	b. Amount
(1)	_____
(2)	_____
(3)	_____

4. State and Local Income Tax Refunds _____
5. Alimony Received _____
6. Rension and Annuity Income _____
7. Rent and Royalty Income

	a. Kind	Total b. Amount	Depreciation c. or Depletion	Other d. Expenses
(1)				
(2)				
(3)				
(4)				

8. Other Income

a. Kind	b. Amount	a. Kind	b. Amount
(1)		(3)	
(2)		(4)	

VI. ADJUSTMENTS TO INCOME

(Moving expenses, employee business expenses, payments to IRA or Keogh, interest penalty, alimony paid.)

1. 3.
2. 4.

ASSIGNMENT SHEET #1

VIII. ITEMIZED DEDUCTIONS (PERSONAL)

1. Medical and Dental Expense
   a. Insurance Premiums _____
   b. Medicine and Drugs _____
   c. Doctors, nurses, dentists, etc. _____
   d. Hospitals _____
   e. Other _____
   f. _____

2. Taxes
   a. State and local income _____ d. General Sales _____
   b. Real Estate _____ e. Personal Property _____
   c. State & Local Gasoline _____ f. Other _____

3. Interest
   a. Home Mortgage _____
   b. Credit and charge cards _____
   c. Other _____
   d. _____

4. Contributions
   a. Cash contributions w/written evidence _____
   b. Other (list)

5. Casualty or Theft Loss (explanation)

6. Misc. Deductions
   a. Union dues _____
   b. Other _____

VIII. CREDITS - WILL I QUALIFY FOR

a. Contributions to Candidates for Public Office _____
b. Child and Dependent Care _____
c. Residential Energy _____
d. Federal Fuel Tax Credit: Type of Use _____ Fuel _____ Gallons
   1. Farming
   2.
e. Other _____

IX. OTHER INFORMATION

ASSIGNMENT SHEET #1

INCOME TAX ESTIMATE WORKSHEET

RECEIPTS:		ESTIMATED AMOUNTS
Sales of products raised* and miscellaneous receipts:		
Cattle, hogs, sheep and wool, etc.		$_____
Poultry, eggs and dairy products		$_____
All crops sales		$_____
Custom work, prorations and refunds agriculture program payments		$_____
Total sales and other farm income	(1)	$_____
Sales of purchased market livestock†		$_____
Purchase cost (subtract)‡		$_____
Gross profits on sales of purchased livestock†	(2)	$_____
Gross farm profits (Item 1 + 2)	(3)	$_____

FARM EXPENSES:					
Labor hired	$_____	Veterinary Medicine	$_____		
Repairs, maintenance	_____	Gasoline, fuel, oil	$_____		
Interest	_____	Storage, warehousing	_____		
Rent of farm, pasture	_____	Taxes	_____		
Feed purchased	_____	Insurance	_____		
Seed, plants purchased	_____	Utilities	_____		
Fertilizers, lime	_____	Freight, trucking	_____		
Machine hire	_____	Conservation expenses	_____		
Supplies purchased	_____	Other Business, Fees	_____		
Breeding fees	_____	Other	_____		
Total cash farm expenses			(4)	$_____	
Depreciation on machinery improvements, dairy and breeding stock			(5)	$_____	
Total deductions (Item 4 + 5)			(6)	$_____	
Self employment farm income (Item 3 less item 6)‡			(7)	$_____	
Net taxable gain from Schedule D (Sales of dairy and breeding stock, machinery and other capital exchanges			(8)	$_____	
Taxable non-farm income			(9)	$_____	
Adjusted gross income (Item 7 + 8 + 9)			(10)	$_____	
Less $_____: Excess itemized deductions** ($1,000 x _____ personal exemptions)***					
Total non-business deductions and exemptions			(11)	$_____	
Taxable income (Item 10 less item 11)			(12)	$_____	
Estimated income tax (calculated from applicable sales tax computation table or rates)			(13)	$_____	
Estimated self-employment tax (Item 7 x current rate)			(14)	$_____	
TOTAL TAX (Item 13 + 14)			(15)	$_____	
Less Credits: allowable investment credit and carryover, gas tax, income tax withheld and estimated tax paid			(16)	$_____	
Estimated tax due (Item 15 less item 16)			(17)	$_____	
ESTIMATED TAX DUE			(18)	$_____	

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* For accrual method include sales of all livestock.

** Use itemized deductions if larger.

*** Exemptions for 1979, see current tax regulations for subsequent years.

† Omit for accrual method.

‡ For accrual method adjust for change in inventory and new livestock purchases.

Courtesy of and adapted from *Income Tax Management for Farmers.* Southern Farm Management Extension Publication No. 17. Cooperative Extension Service. University of Georgia College of Agriculture.

INCOME TAX
UNIT XI

ANSWERS TO ASSIGNMENT SHEET

See following pages.

INCOME TAX ESTIMATE WORKSHEET

RECEIPTS:		ESTIMATED AMOUNTS
Sales of products raised* and miscellaneous receipts:		
Cattle, hogs, sheep and wool, etc.		$ 40,000
Poultry, eggs and dairy products		$
All crops sales		$ 22,500
Custom work, prorations and refunds agriculture program payments		$
Total sales and other farm income	(1)	$ 62,500
Sales of purchased market livestock†		$ 17,000
Purchase cost (subtract)‡		$ 10,000
Gross profits on sales of purchased livestock†	(2)	$ 7,000
Gross farm profits (Item 1 + 2)	(3)	$ 69,500

FARM EXPENSES:			
Labor hired	$ 1,000	Veterinary Medicine	$ 1,200
Repairs, maintenance	2,000	Gasoline, fuel, oil	$ 1,500
Interest		Storage, warehousing	
Rent of farm, pasture	1,500	Taxes	
Feed purchased	15,000	Insurance	
Seed, plants purchased	1,600	Utilities	
Fertilizers, lime	5,000	Freight, trucking	500
Machine hire		Conservation expenses	
Supplies purchased		Other Business, Fees	800
Breeding fees		Other	300

Total cash farm expenses	(4)	$ 30,400
Depreciation on machinery improvements, dairy and breeding stock	(5)	$ 5,200
Total deductions (Item 4 + 5)	(6)	$ 33,900
Self employment farm income (Item 3 less item 6)‡	(7)	$ 33,900
Net taxable gain from Schedule D (Sales of dairy and breeding stock, machinery and other capital exchanges	(8)	$ -0-
Taxable non-farm income	(9)	$ -0-
Adjusted gross income (Item 7 + 8 + 9)	(10)	$ 33,900
Less $_____: Excess itemized deductions** ($1,000 x 5 personal exemptions)***		
Total non-business deductions and exemptions	(11)	$ 5,000
Taxable income (Item 10 less item 11)	(12)	$ 28,900
Estimated income tax (calculated from applicable sales tax computation table or rates)	(13)	$ 4,816
Estimated self-employment tax (Item 7 x current rate)	(14)	$ 1,433.70
TOTAL TAX (Item 13 + 14)	(15)	$ 6,249.70
Less Credits: allowable investment credit and carryover, gas tax, income tax withheld and estimated tax paid	(16)	$ 1,500
Estimated tax due (Item 15 less item 16)	(17)	$ 4,749.70
ESTIMATED STATE INCOME TAX DUE	(18)	$

* For accrual method include sales of all livestock.

** Use itemized deductions if larger.

*** Exemptions for 1979, see current tax regulations for subsequent years.

† Omit for accrual method.

‡ For accrual method adjust for change in inventory and new livestock purchases.

Courtesy of and adapted from *Income Tax Management for Farmers.* Southern Farm Management Extension Publication No. 17. Cooperative Extension Service. University of Georgia College of Agriculture.

INCOME TAX MANAGEMENT
UNIT XII

UNIT OBJECTIVES

After completion of this unit, the cooperator should be able to identify and use different methods of reducing taxable income, culminating in actual use on the farm. This knowledge will be evidenced by completion of assignment sheets.

SPECIFIC OBJECTIVES

After completion of this unit, the cooperator should be able to:

1. Match terms associated with tax management to the correct definitions.
2. Explain income tax credits.
3. Discuss capital gains tax.
4. Determine if income averaging would save tax dollars.
5. Explain self-employment tax.
6. Determine eligibility to participate in retirement accounts.
7. Discuss depreciation strategies.
8. Calculate investment credit.
9. Calculate credit on use of fuels.
10. Study checklist for income tax management.

INCOME TAX MANAGEMENT
UNIT XII

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

A. Provide cooperator with objective sheet.

B. Provide cooperator with information and assignment sheets.

C. Make transparencies.

D. Discuss unit and specific objectives.

E. Discuss information and assignment sheets.

II. Instructional materials:

A. Objective sheet

B. Information sheets

C. Assignment sheets

1. Assignment Sheet #1--Calculate Investment Credit

2. Assignment Sheet #2--Calculate Credit on Use of Fuels

3. Assignment Sheet #3--Study Checklist for Income Tax Management

D. Answers to assignment sheets

III. Unit references:

A. *Federal Tax Guide 1979.* Chicago, Illinois: Commerce Clearing House Inc., 1979.

B. Wheeler, Jon D. *Tax Desk Book for Farming and Ranching.* Englewood Cliffs, New Jersey: Institute for Business Planning, 1978.

C. *Farmers Tax Guide: 1979 Edition, Publication 225* rev. Washington, D.C.: Department of the Treasury, Internal Revenue Service, 1978.*

D. Weigle, R.N., Brown, Edward, Jr., and Smith Robert S. *Income Tax Management for Farmers.* Southern Farm Management Extension Publication No. 17. Cooperative Extension Service, University of Georgia College of Agriculture.

E. Maynard, Cecil D. *Estimating Your 1978 Taxable Farm Income and Taxes: OSU Current Report* No. 738: Stillwater: County Extension Offices, Oklahoma State University.

F. Maynard, Cecil D. *1978 Farm Income Tax Management: OSU Current Report* No. 737: Stillwater: County Extension Offices, Oklahoma State University.

G. Maynard, Cecil D. *Tax Sheltered Retirement Plans for Farmers: OSU Extension Facts* No. 736: Stillwater: County Extension Offices, Oklahoma State University.

H. Reff, Tommy. *Income Tax Management-Investment Credit: Farm Management Planning Guide.* Section VII: No. 8 rev.: Cooperative Extension Service, North Dakota State University, 1978

I. Hopkins, John A., Barry, Peter J., and Baker, C. B. *Financial Management in Agriculture.* Danville, Illinois: The Interstate Printers and Publishers, Inc., 1973.

J. James, Sydney C., and Stoneberg, Everett. *Farm Accounting and Business Analysis.* Ames, Iowa: Iowa State University Press, 1976.

K. *Introduction to the Farm Business Planning and Analysis Program and Teaching Units.* Columbus, Ohio: Ohio Agricultural Education Curriculum Materials Service.

L. *Tax Information on Investment Credit: 1978 Edition* Publication 572 rev. Washington, D.C.: Department of the Treasury, Internal Revenue Service, 1977.*

M. *Tax Information on Individual Retirement Savings Program: 1978 Edition* Publication 560 rev. Washington, D.C.: Department of the Treasury, Internal Revenue Service, 1977.*

N. *Tax Information on Depreciation: 1978 Edition* Publication 334 rev. Washington, D.C.: Department of the Treasury, Internal Revenue Service, 1977.*

O. Gordon, Robert M., et al. *Agricultural Price Support Programs - A Laymans Guide.* Washington, D.C.: Congressional Gudget Office, 1976.

*IRS publications change often. Always use the latest information available

INCOME TAX MANAGEMENT
UNIT XII

INFORMATION SHEET

I. Terms and definitions

A. Investment tax credit--A fiscal tool of the U. S. Treasury which is sometimes used by Congress during periods of recession and discontinued during periods of increased economic activity. It allows a direct deduction from tax liability of 3.3% to 10% for purchases of qualified assets. Investment credit was made permanent under the Revenue Act of 1978

B. Recapture--At the end of each tax year, cooperators must determine whether they disposed of any property during the year for which they took investment credit in prior years. If so, the cooperator must compare actual life with estimated life originally used in estimating the credit. It must be then determined if any or part of the credit must be recaptured (paid back)

C. Capital gains--Capital gains or losses result from the sale or exchange of property used in trade, business, or certain capital assets, and are taxed at a reduced rate

D. Depreciation--Allows cooperator to allocate the cost of an asset with a useful life of more than one year over the life of the asset. Charging depreciation reduces farm profits, but not cash. It also reduces taxable income, but not cash flow

E. Income averaging--Allows part of large amount of taxable income in one year to be taxed in lower brackets, thus reducing the amount of tax paid

F. Operating loss carry-back carry-forward--Process of shifting losses to a previous year, or carrying it forward to recover tax paid in previous years or to reduce future tax

II. Income tax credits--Cooperators may be entitled to reduce their tax with tax credits. This directly reduces tax liability, whether or not the cooperator decides to itemize deductions

A. Investment tax credit

1. To qualify for investment credit, property must be depreciable or amortizable property and have a useful life of at least 3 years. If a cooperators property has a useful life of 3 to 5 years, they would be allowed 1/3 of the allowable credit (3.3%); if the property has useful life of 3 to 5 years, 2/3's of the allowable credit could be taken (6.6%); if the property has a useful life of 7 years or more, the cooperator would be allowed the full credit available (10%)

2. Generally, all tangible personal property used in the business will qualify for credit. However, the greatest portion of eligible property is in the form of machinery

   Examples: Grain storage bins, silos, storage facilities for grain and other commodities, drain tiles for field irrigation, drain tiles for pasture, fences used to confine livestock, hog raising facilities, hen houses or chicken coops, orchards and groves, paved barnyards, wells providing water for livestock, machinery or equipment used in production and breeding livestock

   Property not eligible includes houses, barns, greenhouses, integrated hog-facility (building structure) and stables

3. Maximum investment credit that may be taken is the tax liability, or the first $25,000 of tax liability plus 50% of the tax liability in excess of $25,000

4. Unused credit carrybacks and carryovers are carried back to previous years or carried over to later years. It is first carried back to the three preceeding taxable years and the balance (if any) is carried over the seven succeeding years

5. Property disposed of before the end of its estimated useful life is subject to all or part of the credit being recaptured. Recapture is affected by increasing the tax for the year of disposition by any excess of the original credit over the credit that would have been allowed if it had been computed using actual life

B. Credit for certain uses of gasoline, special fuels, and lubricating oil

1. Anyone who owns, rents, or operates a farm may be entitled to a credit against their income tax for the 4¢ per gallon Federal Excise tax paid on gasoline bought, 6¢ per gallon manufacturers Excise tax paid on lubricating oil, and 7¢ per gallon tax on aviation fuels used in non-commercial aviation

   (NOTE: Non-commercial refers to aviation not subject to passenger and air freight transportation excise taxes.)

2. Any tax credit must be included in gross income to the extent that tax has been previously deducted as a business expense or an expense in the production of income

INFORMATION SHEET

III. Capital gains tax--Gains on the sale of property, which has been held a sufficient length of time, are subject to special tax treatment. The main advantage of capital gains income over ordinary income is that the tax rate is much lower on capital gains

A. Previously, a non-corporation cooperator deducted from gross income 50% of the amount of any net capital gains for the taxable year in question. However, beginning after October 31, 1978, capital gain exclusion for individuals in increased from 50% to 60% (40% taxable). A corporation's capital gains exclusion is increased from 70% to 72% (28% taxable)

B. Long-term gains or losses occur on property held more than 12 months. Sheep and swine must be held 12 months, and dairy cattle, beef cattle and horses must be held 24 months. Short-term gains or losses are property held less than 12 months and are 100% taxable

C. A one-time $100,000 exclusion is provided for sales of principal residences for taxpayers age 55 or over. The rollover provision of present law is allowed for any sale of a principal residence

IV. Income averaging--If income has increased substantially this year, it might be advantageous to compute taxes under the income averaging method to reduce the amount of taxes having to be paid. Eligibility requirements include being a citizen and furnishing 50% or more of the cooperators own support during each of the 4 base period years, and the individual must have average income that exceeds $3,000 for the last 4 years

A. Compute average income

1. Tabulate adjusted gross income for the current tax year

2. Determine total adjusted income for the last 4 years

3. Calculate 30% of your total adjusted income for the last 4 years

4. Subtract the 30% total from the adjusted gross income for the current tax year

Example:

Adjusted taxable income for 1978	$29,880
Less 30% of the total base period adjusted income of $54,000 (.30 x $54,000)	$16,200
Averagable income	$13,680

INFORMATION SHEET

B. Determine if income averaging will save money

Example:

1.	30% of total base period income (.30 x $54,000)	$16,200
2.	20% of averagable income (.20 x $13,680)	$ 2,736
3.	Sum of Lines 1 and 2	$18,936
4.	Tax on sum of Lines 1 and 2	$ 2,075
5.	Tax on 30% of total base period income of $54,000	$ 1,470
6.	Tax on 20% of averagable income (Line 4 minus Line 5)	$605
7.	Tax on 80% of averagable income (Line 6 times 4)	$ 2,420
8.	Tax on 20% of averagable income plus tax on 30% of base period income (Line 4)	$ 2,075
9.	Tax on 80% of averagable income (Line 7)	$ 2,420
10.	Tax under income averaging (Line 8 plus Line 9)	$ 4,495
11.	Tax on $29,880 under regular method	$ 5,136
12.	Tax under incoming averaging	$ 4,495
13.	Reduction in tax under the income averaging method	$ 641

By using the income averaging method, $641 in tax liability was saved

V. Self-employment tax--Each self-employed person must pay self-employment tax on part or all of their income. Cooperators must file an income tax return and pay self-employment tax if net earnings from farming exceed $400 or more even though not required to file an income tax return

A. If a cooperator carries on a trade or business as a sole proprietor, member of a partnership, independent contractor, or otherwise in business for themselves, that individual is probably liable for self-employment tax

INFORMATION SHEET

B. Net earnings from the farm is generally the net income for a cooperators business. Earnings include all of the items of business income and deductions allowable. Do not include certain kinds of income and deductions, although they are used in computing tax

Examples: Income not included in self-employment tax tabulation includes gain or loss from the sale or exchange of livestock held primarily for dairy, breeding, or sporting purposes, and not held primarily for sale, regardless of how long held, or whether raised or purchased; gains or losses from the sale of standing crops sold with land held more than 9 months, or gains or losses on the sale of investment property; gains or losses in the sale of depreciable property or other fixed assets used in farming

C. Rate of tax on self-employed income varies. To determine the amount of wages subject to self-employment contributions, contact the nearest IRS representative

D. If a cooperator has a small income or a loss during the year, a special method of determining self-employment tax may be used. If gross income (profit) from farming or ranching is under $2,400, 2/3's of gross income (profit) may be treated as net earnings from farm self-employment, even though net income is less than that or even if a loss is incurred. If gross income (profit) from farming or ranching is more than $2,400 and actual net earnings from farm self-employment is less than $1,600, the $1,600 may be treated as net earnings from self-employment. Finally, if gross income (profit) is more than $2,400 and net income is more than $1,600, the individual must report the actual amount of net earnings

VI. Eligibility to participate in retirement accounts--For tax years beginning after 1974, cooperators may establish their own retirement savings program. If eligible, cooperators are allowed to make deductible contributions to this program equal to the lesser of 15% of income or $1,500 per year, which ever is less. Income from the fund is not taxable until it is distributed to the cooperator

(NOTE: Cooperators may contribute to individual retirement accounts if they are not actively participating in any part of the tax year in a pension, profit sharing plan, stock bonus plan of an employer, qualified annuity plan of an employer, or qualified bond purchase plan of an employer.)

A. Individual retirement account--For tax years after 1976, if an individual was married but their spouse was unemployed, a program could be started for both parties separately. Total contributions may not exceed $1,750 yearly. A cooperator participating in Social Security or railroad retirement plan is not excluded from establishing and making tax deductible contributions to their own individual retirement accounts. Generally, most farmers will be eligible for participation

(NOTE: Cooperators may make tax deductible contributions to individual retirement savings program through individual retirement accounts at banks, federally insured credit unions, saving and loan associations, or through individual retirement bonds purchased from the U.S. Government or a trust account established by an employer or an employee association.)

B. Withdrawal from the account is taxed as ordinary income and not eligible for capital gains treatment. Generally, cooperators may withdraw when the age of 59 1/2 is reached. Earlier withdrawal may incur an additional 10% income tax liability. Withdrawals must be made before the age of 70 1/2

C. Payments from individual retirement savings programs received before the age of 59 1/2 will have to be included in the amount of gross income in the year of receipt. In addition, tax liability is increased by an amount equal to 10% of the premature withdrawal

D. Penalties consisting of a 50% excise tax are imposed on undistributed income after the age of 70 1/2

Example: If a cooperator should have withdrawn $1,000 this year but withdrew only $600, an excise tax of $200 would have to be paid

$1,000 - $600 = $400

$400 x .50 = $200 penalty

VII. Depreciation strategies--Cooperators are entitled to deduct as depreciation, an allowance for wear and tear of assets used in the farm business. Depreciation may also be calculated on livestock acquired for work, breeding, or dairy purposes. The deduction is allowed to let the cooperator recover the investment in the property over a period of the assets useful life

(NOTE: The straight-line method of depreciation is the most commonly used in agriculture. Although the straight-line method is the easiest to calculate, declining balance and sum-of-the-years digits have advantages for certain individuals.)

A. The income situation in the year a depreciable asset is purchased should help the cooperator decide which method to use on the item. If income is unusually high in the year, the cooperator might wish to select one of the quicker write off methods of calculating depreciation

B. Accelerated depreciation may help the farmer or rancher who expects to retire before the useful life of the item is expended. It may also be of advantage to young cooperators in keeping their tax held lower and leaving more cash available to retire debt and expand the business

INFORMATION SHEET

C. If a cooperator is expanding the business or expects higher income in the future, this individual might prefer to continue using the straight-line method on newly purchased items in order to have more depreciation in future years

D. An additional 20% depreciation is available on the first year of life for assets with a useful life of six years or more using the Class Life Asset Depreciation Range System (ADR)

INCOME TAX MANAGEMENT
UNIT XII

ASSIGNMENT SHEET #1--CALCULATE INVESTMENT CREDIT

You have decided to purchase a new tractor. The cost of the tractor is $71,000 and it is estimated the tractor will have a useful life of 10 years. You are eligible to receive investment credit on the tractor. Compute investment credit available.

(NOTE: Do not calculate the additional 20% depreciation which is available on the investment.)

INCOME TAX MANAGEMENT
UNIT XII

ASSIGNMENT SHEET #2--CALCULATE CREDIT ON USE OF FUELS

When buying gasoline, the price may include a Federal gasoline tax. You may claim a credit against your income tax for the tax on any gasoline used during the year on the farm. You are entitled to a credit of 4 cents for each gallon of gasoline used during the tax year. Aviation fuel allows you a credit of 7 cents for each gallon of fuel used. Lubricating oil is allowed 6 cents a gallon credit. This does not include any vehicles which may have been used on the highway. During the year you used 2,500 gallons of gasoline, 200 gallons of aviation fuel for spraying your crops and 50 gallons of lubricating oil in tractors, combines, and other farm machinery. How much credit may you take on the fuel and lubricating oil used?

INCOME TAX MANAGEMENT
UNIT XII

ASSIGNMENT SHEET #3--STUDY CHECK LIST FOR INCOME TAX MANAGEMENT

Before visiting your tax practitioner, use this brief checklist to save time. It could save money.

A. Use all deductions--Keep accurate records and be aware of business expenses

B. Utilize capital gains--Take advantage of all income earned that can be treated as capital gains to qualify for the lower tax rate

C. Special provisions

1. Income averaging--Are you eligible and can it save you money?

2. Investment credit--Did you purchase machinery or equipment this year? If you did, you may be eligible for credit.

3. Self-employment tax and retirement plans--How much will you have to pay? Are you capable of beginning an individual retirement account.

4. Loss carry-back carry-forward--Can you recover any tax paid or eliminate some taxes in the future by taking advantage of a loss this year?

D. Consult a competent Certified Public Accountant or tax attorney--If you need help don't be afraid to talk with a CPA or tax attorney. They are experts in the field of tax management and can offer valuable advice

INCOME TAX MANAGEMENT
UNIT XII

ANSWERS TO ASSIGNMENT SHEETS

Assignment Sheet #1

TRACTOR COST	$71,000
PERCENT ELIGIBLE	x 100%
	$71,000
INVESTMENT CREDIT	x .10
INVESTMENT CREDIT AVAILABLE	$7,100

Investment credit should be taken to reduce your income tax bill. This tractor has a useful life of over 7 years so it is eligible for the entire credit. The amount of credit that may be taken on the tractor is $7,100

Assignment sheet #2

GASOLINE	(2,500 x .04) = $100
AVIATION FUEL	(200 x .07) = $ 14
LUBRICATING OIL	(50 x .06) = $ 3
	$117

$117 in credits are available. To claim these credits, you must provide proof of use

YEAR-END CLOSING OF RECORDS
UNIT XIII

UNIT OBJECTIVE

After completion of this unit, the cooperator should be able to identify terms associated with vear-end closing of records. The cooperator should be able to prepare a closing inventory and discuss the procedure for a summation of records. This knowledge will be evidenced by demonstrations and closing of the *Oklahoma Young Farmer Association Record Book.*

SPECIFIC OBJECTIVES

After completion of this unit, the cooperator should be able to:

1. Match terms and definitions associated with year-end closing of records.
2. Discuss in a short paragraph value of closing inventory.
3. Discuss in a short paragraph the importance of inventory.
4. Summarize in a paragraph the importance of farm record analysis.
5. Describe the procedure for updating a depreciation schedule.
6. Complete closing inventory for crops and feed.
7. Complete closing inventory for livestock.

YEAR-END CLOSING OF RECORDS
UNIT XIII

SUGGESTED ACTIVITIES

I. Suggested activities for the instructor:

A. Provide cooperator with objective sheet.

B. Provide cooperator with information and assignment sheets.

C. Make transparencies.

D. Discuss unit and specific objectives.

E. Discuss information in assignment sheets.

F. Point out that Unit 13 is not intended as a comprehensive look at every item mentioned; most items have already had an in-depth look in previous units or will be covered in later units.

II. Instructional materials:

A. Objective sheet

B. Information sheet

C. Assignment sheets

1. Assignment Sheet #1--Complete Closing Inventory for Crops and Feed

2. Assignment Sheet #2--Complete Closing Inventory for Livestock

D. Answers to assignment sheets

III. Unit references:

A. Williams, Joseph E. and Casey, James E. *Farm and Ranch Management I Notes.* Stillwater: Oklahoma State University/Department of Agricultural Economics, N.D.

B. *Tax Information on Depreciation: 1978 Edition Publication 534* rev. Washington, D.C.: Department of the Treasury, Internal Revenue Service, 1977.

C. James, Sydney C., and Stoneberg, Everett. *Farm Accounting and Business Analysis.* Ames, Iowa: Iowa State University Press, 1976.

D. Hopkin, John A., Berry, Peter J., and Baker C. B. *Financial Management in Agriculture.* Danville, Illinois: The Interstate Printers & Publishers, 1973.

E. Suter, Robert C. *The Appraisal of Farm Real Estate.* Danville, Illinois: The Interstate Printers & Publishers, Inc., 1975.

F. Jeffrey, D.B. *File It and Find It.* Oklahoma State University Extension Facts, no. 300. Stillwater: Oklahoma State University, 1967.

G. *Oklahoma Young Farmer Association Record Book.*

YEAR-END CLOSING OF RECORDS
UNIT XIII

INFORMATION SHEET

I. Terms and definitions

A. Farm inventory--List of farm property and accounts owed to and by the farm business at a single point in time with current values assigned to all items. This includes land, buildings, machinery, tools, livestock, feeds, and supplies; also growing crops and miscellaneous improvements

B. Physical inventory--Actual counting process that involves each asset being listed and briefly described

C. Tangible property--Real and personal property. Real property is land or anything attached to it. Personal property is property which can be moved around, such as machinery and power equipment

D. Intangible property--Includes money in the bank, stocks and bonds, money owed to you or by you, and things such as goodwill

E. Present market value--Most likely price that a given item can be sold or transferred from a willing and well-informed seller to a willing and well-informed buyer

F. Liquidity--Firms capacity to generate sufficient cash to meet its short-term financial commitments as they are due

G. Solvency--Firms ability to meet long-run claims. A farm is insolvent if the sale of all assets fails to generate sufficient cash to pay-off all liabilities

II. Value of closing inventory--Inventory is a system of listing and assigning anything concerned with crops, livestock, and supplies used in farm production. Cooperators do not need to assign values to land every year if the original cost is known or a valid estimate can be obtained for the initial period

A. In computing physical inventory, it is critical that all items be measured in established and accepted amounts. It is also important for like items to be grouped together. Corn, wheat, and cotton might be included under cash crops, but there should be a separate division for each crop. Livestock should be grouped under one classification then further divided by age, type, and sex

Examples: Bushels for grain, hundred weight for hogs or cattle, gallons for insecticide, pesticide, gasoline

INFORMATION SHEET

B. When physical inventory is taken for the first time, all buildings and machinery should be listed separately with original cost indicated. Subsequent inventories merely need to reflect valuation changes. Market value may be useful in estimating value, if original cost is unknown

C. All tangible property must be valued by estimation or appraisal. Generally, appraisal is the best method because the person doing the appraising is more likely to be familiar with the valuation process and be more accurate than just a guess

D. Value of land should be determined without the buildings on it being included. Land values may be determined by cost or by current market value

E. Feeder cattle (nonbreeding livestock) should be valued according to current market value. Breeding cattle values should be determined by the cost of production

F. Machinery should be valued at original cost, less depreciation, for a new machine. If estimating the value of a used machine, use replacement cost in present condition

G. Crops should be valued at current market value, but beware of grade differences or you could be under or overestimating the value of the crop

III. Importance of inventory--Inventory record is of extreme importance because it provides information about total investment in the business, how much is invested in different areas of the business and shows accounts owed to and by the business. Inventory allows the cooperator to complete a new balance sheet, which may be used in financial analysis of the farm

A. Inventory provides valuable information which can be used for short-run projection on the farm, such as fixed to working capital ratio, total assets to total liabilities ratio, and the leverage ratio

Example: Leaverage ratio deals with the farm's ability to meet long-term claims. From a lender's viewpoint, the ratio indicates the problems of recovery of loans if the business fails. Primarily, it indicates that for every dollar of equity in the farm, the cooperator has so many dollars of debt (borrowed) capital

B. Inventory records detail many important trends. However, inventory cannot tell why changes occurred and cannot show profit or loss on any enterprise during the year

C. Inventory forms the basis for analysis of the farm business

INFORMATION SHEET

D. Inventory shows resources available when deciding on agricultural enterprises

E. Inventory shows machinery and equipment available to be used or sold

F. Inventory is valuable in determining insurance needs and making claims on property loss

G. It is easier to borrow money when an application for a loan is accompanied with an inventory. Bankers would rather lend money on more liquid assets like livestock and stored crops than on equipment and buildings

IV. Importance of farm record analysis--Analysis of farm records gives the most useful information for the entire year. This allows the operator to see where the farm business is going. Once the initial year's records are complete, these may be compared against future years. Financial statements will allow the cooperator insight into the farm business

(NOTE: The greater number of years for which a cooperator has complete records will provide a basis for analysis of important trends.)

A. Cash flow--Allows cooperator to look at all receipts and expenditures for the year. It allows cooperator to project future cash needs of the farm. Accurate cash flow projection allows cooperator to determine during which month money will need to be borrowed, how much, and when the cash will be available to pay back the loan

B. Net worth--Allows individuals to get a picture of the financial condition of the farm at a specific point in time. It reveals liquidity and solvency at a particular time

C. Income statement or profit and loss statement--Information needed for computing the income statement can only be found from record data. The statement can be no better than the accuracy of the records. Income statements become more useful when a number of summaries are available for comparision and analysis. Trends may indicate special attention should be paid in controlling certain business inputs. Dividing profits by total equity gives the return on equity future, which is important in determining farm growth

V. Updating a depreciation schedule--If depreciation is not charged at the end of the year, incorrect readings are obtained as to how the farm is actually doing, operating costs are too low, farm income is too high, and income tax payments are too high

A. Useful life--May not necessarily be the useful life inherent in the asset but the period of time which the asset reasonably may be expected to be useful for purposes of producing income

Examples: Useful life may be estimated from farming operations or from past experience

INFORMATION SHEET

B. Depreciation records--Are kept easily by using forms available in the *Oklahoma Young Farmer Association Record Book* on Forms 13, 14, 15, and 16. By adding the column for depreciation in the year in question, the total depreciation charge available is derived. This may be applied against taxable income. Using this form, information is available on remaining book value, total original cost, and depreciation taken in prior years

(NOTE: This is an appropriate time to complete inventory for this year.)

C. End results--The above applications of records enable cooperator to convey what happened on the farm during the preceding year to the tax practitioner currently being employed

YEAR-END CLOSING OF RECORDS
UNIT XIII

ASSIGNMENT SHEET #1--COMPLETE CLOSING INVENTORY FOR CROPS AND FEED

You are preparing your inventory of crops, feed, and seed. Inventory was taken January 1, 1978 and it revealed the following items:

A. 5 tons protein supplements valued at $200/ton

B. 10,000 bushels corn valued at $2.27/bushel

C. 1,200 bushels wheat valued at $2.78/bushel

D. 1,000 cwt. grain sorghum valued at $2.00/cwt

E. 2,500 bushels soybeans valued at $6.45/bushel

F. 100 tons of stored fertilizer valued at $120/ton

G. 500 pounds of bedding valued at $1.00/pound

On December 31, 1978 inventory, is again taken and reveals the following:

A. 15 tons protein supplements valued at $300/ton

B. 12,000 bushels corn valued at $2.15/bushel

C. 1,800 bushels wheat valued at $2.30/bushel

D. 3,000 bushels soybeans valued at $5.25/bushel

E. 150 tons of stored fertilizer valued at $120/ton

F. 600 pounds of bedding valued at $1.00/pound

Complete from the following information the closing inventory for feed, stored and growing crops on Form 18 of the *Oklahoma Young Farmer Association Record Book.*

FORM 18 INVENTORY OF FEED, STORED & GROWING CROPS AND CROP & LIVESTOCK SUPPLIES

LINE		START 19__			END 19__			END 19__			END 19__			END 19__			LINE
		QUANT.	PRICE PER UNIT	TOTAL VALUE	QUANT.	PRICE PER UNIT	TOTAL VALUE	QUANT.	PRICE PER UNIT	TOTAL VALUE	QUANT.	PRICE PER UNIT	TOTAL VALUE	QUANT.	PRICE PER UNIT	TOTAL VALUE	
	PURCHASED FEEDS																
1	Prepared Feeds																1
2																	2
3	Protein Supplements																3
4																	4
5	Vitamins, Minerals																5
6																	6
7	TOTAL PURCHASED FEEDS																7
	STORED CROPS																
8	Corn																8
9	Wheat																9
10	Grain Sorghum																10
11	Soybeans																11
12	Cotton																12
13	Silage																13
14																	14
15	Hay																15
16																	16
17	Straw																17
18	TOTAL STORED CROPS																18
	GROWING CROPS $ invested																
19																	19
20																	20
21	TOTAL GROWING CROPS																21
	CROP SUPPLIES																
22	Seeds																22
23																	23
24	Fertilizer, Lime Applied																24
25	Fertilizer Stored																25
26																	26
27	Herbicides																27
28																	28
29	Insecticides																29
30	Fungicides																30
31	Twine, Etc.																31
32	Fuel																32
33																	33
34	Oil																34
35	Grease																35
36	TOTAL CROP SUPPLIES																36
	LIVESTOCK SUPPLIES																
37	Veterinary Supplies																37
38																	38
39	Bedding																39
40	Other Supplies																40
41																	41
42																	42
43	TOTAL LIVESTOCK SUPPL.																43
44	FORM TOTAL																44

YEAR-END CLOSING OF RECORDS
UNIT XIII

ASSIGNMENT SHEET #2--COMPLETE CLOSING INVENTORY FOR LIVESTOCK

You have records indicating as of January 1, 1978 you own:

A. 61 head breeding hogs

1. Total weight of these hogs was 24,450 pounds
2. You paid $8,590 for them

B. 121 head of non-breeding hogs

1. Total weight of these hogs was 9,000 pounds
2. You paid $3,600 for them

You also have determined that as of December 31, 1978 you owned:

A. 41 head breeding hogs

1. Total weight of these hogs was 16,300 pounds
2. Value was estimated at $5,184

B. You also own 20 registered sows

1. Total weight of these hogs was 7,500 pounds
2. Value was estimated at $2,000

C. You own 350 head of non-breeding hogs

1. Total weight of these hogs was 35,000 pounds
2. Value was estimated at $17,500

It also has been noted that as of January 1, 1978 you owned:

A. 50 head of breeding beef

1. Total weight of breeding beef is 55,000 pounds
2. Value was estimated at $11,400

B. 10 heifers for non-breeding purposes

1. Total weight of these heifers is 8,000 pounds
2. Value is estimated at $3,200

ASSIGNMENT SHEET #2

C. 24 steer calves

1. Total weight is 9,500 pounds
2. Value is estimated at $4,500

You have determined that on December 31, 1978 you own:

A. 49 breeding cows

1. Total weight of these cows was 53,700 pounds
2. Value is estimated at $10,026

B. 10 heifers for non-breeding purposes

1. Total weight of these cows is 7,000 pounds
2. Value is estimated at $3,100

C. 10 head of registered cows

1. Total weight of these cows is 10,000 pounds
2. Value is estimated at $4,000

D. 22 steers

1. Total weight is 8,800 pounds
2. Value is estimated at $4,400

Complete the opening and closing inventory on Form 17 for livestock.

FORM 17 **INVENTORY OF LIVESTOCK**

LINE		START 19__				END 19__				END 19__				END 19__				END 19__				LINE
		NO. HEAD	TOTAL WT.	PRICE PER CWT.	TOTAL VALUE	NO. HEAD	TOTAL WT.	PRICE PER CWT.	TOTAL VALUE	NO. HEAD	TOTAL WT.	PRICE PER CWT.	TOTAL VALUE	NO. HEAD	TOTAL WT	PRICE PER CWT.	TOTAL VALUE	NO. HEAD	TOTAL WT.	PRICE PER CWT.	TOTAL VALUE	
	SWINE																					
1	Purch. Breeding F. 14/15																					1
2	Red. Breeding - Sows																					2
3	- Gilts																					3
4	- Boars																					4
5	TOTAL BREEDING SWINE																					5
6	Hogs																					6
7	Pigs																					7
8	Gilts																					8
9	Boars																					9
10	TOT. NON-BREED. SWINE																					10
11	TOTAL SWINE																					11
	BEEF																					
12	Purch. Breeding F. 14/15																					12
13	Red. Breeding - Cows																					13
14	- Heifers																					14
15	- Bulls																					15
16	TOTAL BREEDING BEEF																					16
17	1-2 years Heifers																					17
18	Bulls																					18
19	weaned, Heifers																					19
20	Bulls																					20
21	Steers																					21
22	Sucking Calves																					22
23	TOTAL NON-BREED. BEEF																					23
24	TOTAL BEEF																					24
	DAIRY																					
25	Purch. Breeding F. 14/15																					25
26	Red. Breeding - Cows																					26
27	Bred Heifers																					27
28	Open Heifers																					28
29	Bulls																					29
30	TOTAL BREEDING DAIRY																					30
31	Heifers																					31
32	Bulls																					32
33	Steers																					33
34	Calves																					34
35	TOT. NON-BREED. DAIRY																					35
36	TOTAL DAIRY																					36
	OTHER																					
37																						37
38																						38
39	TOT. BREEDING																					39
40																						40
41																						41
42	TOT. NON-BREEDING																					42
43	TOTAL																					43
44	FORM TOTAL																					44
45	TOTAL RAISED BREEDING																					45

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YEAR-END CLOSING OF RECORDS
UNIT XIII

ANSWERS TO ASSIGNMENT SHEETS

See following pages.

FORM 18 INVENTORY OF FEED, STORED & GROWING CROPS AND CROP & LIVESTOCK SUPPLIES

LINE		START 1978			END 1978			END 19__			END 19__			END 19__			LINE
		QUANT.	PRICE PER UNIT	TOTAL VALUE	QUANT.	PRICE PER UNIT	TOTAL VALUE	QUANT.	PRICE PER UNIT	TOTAL VALUE	QUANT.	PRICE PER UNIT	TOTAL VALUE	QUANT.	PRICE PER UNIT	TOTAL VALUE	
	PURCHASED FEEDS																
1	Prepared Feeds																1
2																	2
3	Protein Supplements	5 Tons	$200	1000	15 Tons	$300	4500										3
4																	4
5	Vitamins, Minerals																5
6																	6
7	TOTAL PURCHASED FEEDS			1000			4500										7
	STORED CROPS																
8	Corn	10000	2.29	22900	12000	2.15	25800										8
9	Wheat	1200	2.78	3336	1800	2.30	4140										9
10	Grain Sorghum	1000	2.00	2000													10
11	Soybeans	2500	6.45	16125	3000	5.25	15750										11
12	Cotton																12
13	Silage																13
14																	14
15	Hay																15
16																	16
17	Straw																17
18	TOTAL STORED CROPS			44361			45690										18
	GROWING CROPS $ invested																
19																	19
20																	20
21	TOTAL GROWING CROPS																21
	CROP SUPPLIES																
22	Seeds																22
23																	23
24	Fertilizer, Lime Applied																24
25	Fertilizer Stored	100	50	5000	150	50	7500										25
26																	26
27	Herbicides																27
28																	28
29	Insecticides																29
30	Fungicides																30
31	Twine, Etc.																31
32	Fuel																32
33																	33
34	Oil																34
35	Grease																35
36	TOTAL CROP SUPPLIES			5000			7500										36
	LIVESTOCK SUPPLIES																
37	Veterinary Supplies																37
38																	38
39	Bedding	500	1	500	600	1	600										39
40	Other Supplies																40
41																	41
42																	42
43	TOTAL LIVESTOCK SUPPL.			500			600										43
44	FORM TOTAL			50861			58290										44

Answers to Assignment Sheet #1

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FORM 17 **INVENTORY OF LIVESTOCK**

LINE		START 1978				END 1978				END 19__				END 19__				END 19__				LINE
		NO. HEAD	TOTAL WT.	PRICE PER UNIT	TOTAL VALUE	NO. HEAD	TOTAL WT.	PRICE PER UNIT	TOTAL VALUE	NO. HEAD	TOTAL WT.	PRICE PER UNIT	TOTAL VALUE	NO. HEAD	TOTAL WT	PRICE PER UNIT	TOTAL VALUE	NO. HEAD	TOTAL WT.	PRICE PER UNIT	TOTAL VALUE	
	SWINE																					
1	Purch. Breeding F. 14/15	61	24450		8590	41	16300		5184													1
2	Rsd. Breeding · Sows					20	7500		2000													2
3	· Gilts																					3
4	· Boars																					4
5	TOTAL BREEDING SWINE	61	24450		8590	61	23800		7184													5
6	Hogs	120	9000	36	3600	350	35000	50	17500													6
7	Pigs																					7
8	Gilts																					8
9	Boars																					9
10	TOT. NON-BREED. SWINE	120	9000		3600	350	35000		17500													10
11	TOTAL SWINE	181	33450		12190	411	58800		24684													11
	BEEF																					
12	Purch. Breeding F. 14/15	50	55000		11400	49	53700		10026													12
13	Rsd. Breeding · Cows					10	10000		4000													13
14	· Heifers																					14
15	· Bulls																					15
16	TOTAL BREEDING BEEF	50	55000		11400	59	63700		14026													16
17	1-2 years Heifers																					17
18	Bulls																					18
19	weaned, Heifers	10	8000		3200	10	7000		3100													19
20	Bulls																					20
21	Steers	24	9500		4500	22	8800		4400													21
22	Sucking Calves																					22
23	TOTAL NON-BREED. BEEF	34	17500		7700	32	15800		7500													23
24	TOTAL BEEF	84	72500		19100	91	79500		21526													24
	DAIRY																					
25	Purch. Breeding F. 14/15																					25
26	Rsd. Breeding · Cows																					26
27	Bred Heifers																					27
28	Open Heifers																					28
29	Bulls																					29
30	TOTAL BREEDING DAIRY																					30
31	Heifers																					31
32	Bulls																					32
33	Steers																					33
34	Calves																					34
35	TOT. NON-BREED. DAIRY																					35
36	TOTAL DAIRY																					36
	OTHER																					
37																						37
38																						38
39	TOT. BREEDING																					39
40																						40
41																						41
42	TOT. NON-BREEDING																					42
43	TOTAL																					43
44	FORM TOTAL				31290				46210													44
45	TOTAL RAISED BREEDING																					45

Answers to Assignment Sheet #2

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